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DUDLEY ALLEN  
SARGENT:  
AN AUTOBIOGRAPHY

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THE PHYSICAL EDUCATION REPRINT SERIES

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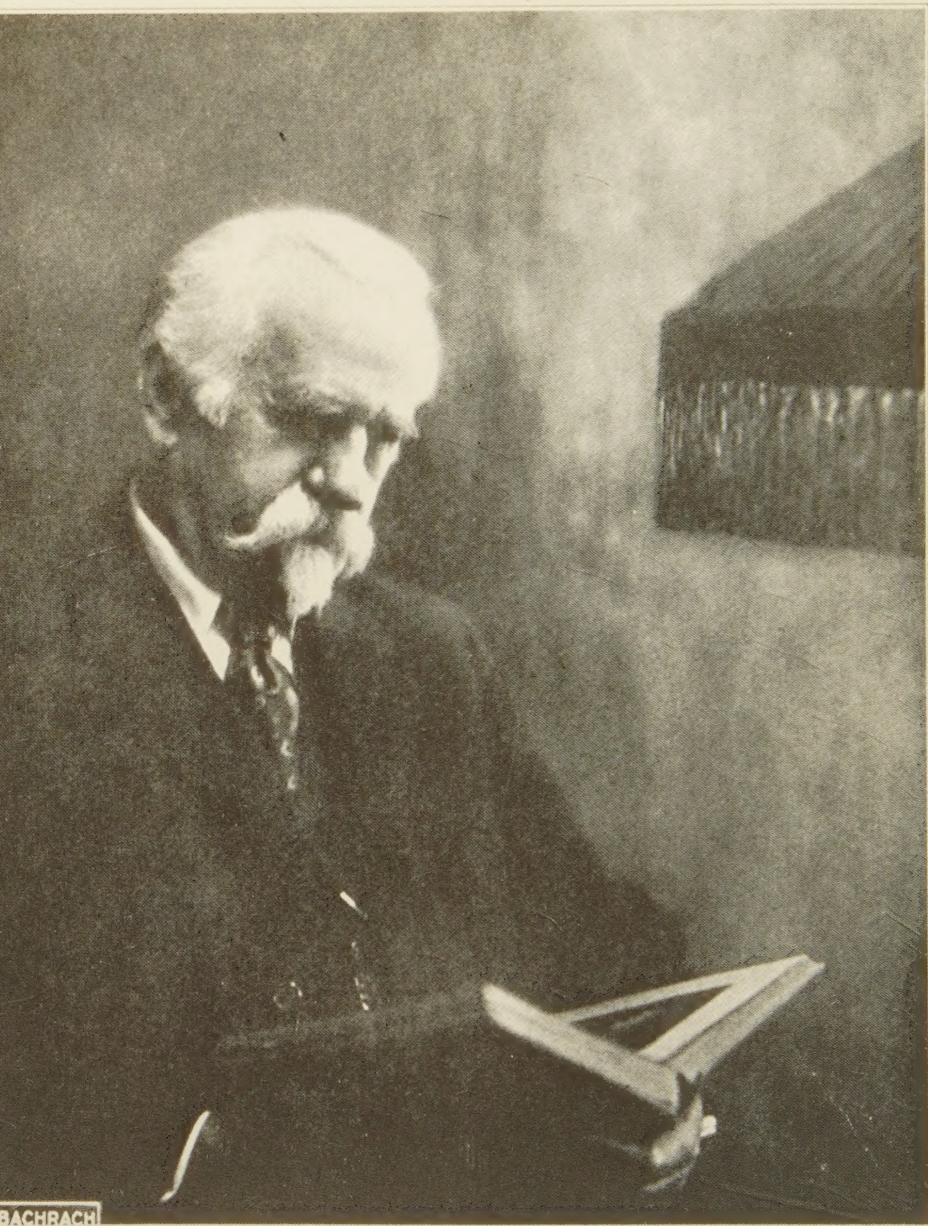
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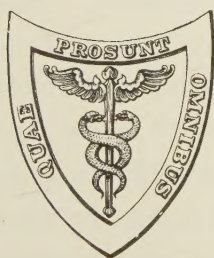
DR. DUDLEY ALLEN SARGENT

# DUDLEY ALLEN SARGENT

## AN AUTOBIOGRAPHY

EDITED BY  
LEDYARD W. SARGENT

WITH AN INTRODUCTION BY  
R. TAIT MCKENZIE, M.D.



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## AUTHOR'S PREFACE.

FOR the pasty fifty years, I have devoted much of my time and all of my energy to the development of physical education in America. The physical weaknesses, which the World War brought into prominence, have commanded so much attention that I am led to believe that my experiences in endeavoring to improve the physique of large numbers of persons of all ages of both sexes may be of interest to the public.

In recounting these experiences, it will appear that I must necessarily tell a good deal of the story of my own life. Events and circumstances, which constantly become more significant to me, as I realize their influence in moulding my conduct, have so shaped my career, that I have directed my course of action, certainly consistently and persistently, if not always wisely, along the single line of physical education.

Someone once said that every person has two educations: One, fundamental enough, which he receives from others; the other, much more important, which he gives himself. May I add a third? Mine is the education derived from externals, thrust upon us unwillingly in some cases, but which most of us, through hereditary instincts and natural reactions, are bound to acquire. It is the common experiences of our lives, which make and shape us. "Our deeds follow us from afar, and what we have been, makes us what we are," says George Eliot. Our lives are our richest sources of education.

In recounting mine, I hope that I may be offering a short cut in education to those who can use my experiences as a stepping stone. The kind reader is asked to bear with whatever atmosphere of egotism the constant use of the personal pronoun may suggest, and to realize that I make no claim for personal credit, even for that success, which might be termed personal. My professional reputation, bestowed in late years by my friends, has reached a point which I cannot sustain with my abilities.

Furthermore, in going back to my boyhood in this life story, I return to a period, when, as a school boy of fifteen years, the great fundamentals upon which my plea for physical education rests were as clear to me as they are today at the age of seventy. I prefer, therefore, to stand as a forwarding agent, thrown up to the surface with others in a great world movement, rather than as a claimant for personal recognition.

The early convictions, with which I start, have been supplemented and confirmed by years of educational experience. I am profoundly grateful for having been afforded the opportunity to arouse so many people to an interest in their physical welfare, and to help to promote it. It is this sense of gratitude to a confiding public, together with the desire to take them, in turn, into my confidence by laying before them my simple story, that has led me to resort to the personal narrative.

## EDITOR'S NOTE.

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To those who are familiar with my father's career the ending of the autobiography must seem abrupt, since so much has been omitted. So consistently has he followed his purpose of including personal events only as a background for the professional narrative—a plan which nevertheless permitted a great deal that was entirely personal in the first chapters—that no mention is made of his marriage to my mother, Ella Frazier Ledyard, on April 7, 1881, nor of his visits to the Olympic Games in London and the Turnfest at Frankfurt in 1908 which he attended as a guest of the Turnerbund, although these trips were taken largely for professional purposes. Of his vacations, important through their very insignificance, his extensive reading and library, and his personal diversions, no mention is made.

Entirely in keeping with this plan of an essentially professional narrative, however, would have been the inclusion of much more about his own school. Of the great camp which bears his name, which he founded and where he most loved to be, he speaks not at all. Who could better have told of the beginnings of the American Physical Education Association, or of his work in the Boston Health Education League, that little group that in a small but effective way distributed pamphlets prepared in a popular style by experts on health matters. Today we take as a matter of course such distribution by large and heavily endowed organizations.

To some Harvard men it will be a disappointment to find so little about the long struggle to obtain official recognition of modern ideals in physical education, a struggle which, while unsuccessful there, certainly was successful to a remark-



able degree in large numbers of other schools and colleges. A part-time arrangement with the University, making outside work possible, the Summer School—a project really his own, enjoying a sort of semiofficial sanction—and his own normal school afforded the outlet at least to his abilities as a teacher and leader, if not to his tastes and powers as a scientific investigator for which he was distinguished at the World's Fair in 1893. A bit of interesting history would have been his experiences as secretary of the Faculty Committee on Athletics that drew up regulations which aroused bitter opposition at the time, in spite of the fact that they “were in the main right and for the best interest of athletics, as became evident years later, when the students themselves adopted nearly all of them. . . . This was a time when a little courage and firmness on the part of college faculties would have given them a grip upon the athletic situation which they have never since attained.”

I know that one reason for his omitting all this controversial material when he came to this part of the biography was his physical condition, which would have made living over again those periods of worry and tenseness, intensely uncomfortable if not actually unsafe. But another reason, I am convinced, is that he wished to do nothing which might seem unwise or prejudicial in the opinion of President Eliot, then living, for whom he held the greatest admiration and whose personal support he had enjoyed and valued highly for so long.

As it came to me, the manuscript had been edited by Miss Katharine Barbey, who had prepared typed copies of portions from time to time as she and Dr. Sargent went over his rough draft together, eliminating and adding subject-matter as he thought best. An association of several years as a teacher in the normal school, and as an assistant in my father's courses had not failed to increase Miss Barbey's helpfulness. Such editing as I have done has consisted of correcting obvious oversights (of which some may still remain), clarifying what I recognized to be some apparent

inconsistencies, and putting emphasis where I knew it had been intended.

To Dr. McKenzie, a friend peculiarly adapted to appreciate my father, and like him, a very busy man, my deepest gratitude is due for his kindness in preparing the Introduction in moments stolen from an already overcrowded life.

Intensely idealistic and with an indomitable persistence, my father devoted his entire energy to the promotion of education, and physical education in particular, foregoing much that other men would have considered desirable diversions. His reading, though very broad, was almost entirely of the sort that appertained directly or indirectly to education and philosophy, while he really deprived himself of much in the line of art and music, for which he had a natural appreciation, as well as of periods of ordinary relaxation that might have done much to conserve his health. Briefly, he took his greatest enjoyment in his work.

Accordingly it seems altogether fitting that when the time came for the great change, he should be at the camp he loved so dearly, and in the midst of the young life of children, benefitting by that natural living which he strove to promote. All Nature was at its best, and the radiance of the day, following a dawn of inspiring beauty, seemed to be a fitting tribute to one whose utmost wish was to make life richer and fuller. Such was the morning of the twenty-first of July, 1924, when at about eleven o'clock came that which men call *the end*.

L. W. S.

CAMBRIDGE, MASS., 1927.





# CONTENTS.

---

## CHAPTER I.

IN HINGHAM . . . . .	17
----------------------	----

## CHAPTER II.

IN BELFAST . . . . .	29
----------------------	----

## CHAPTER III.

ABOARD THE "MOSES EDDY"—1864 . . . . .	37
--	----

## CHAPTER IV.

A NORMAL INTERVAL OF LABOR AND ACTIVITY . . . . .	49
---	----

## CHAPTER V.

1866—I FIND MYSELF AS A GYMNAST . . . . .	58
---	----

## CHAPTER VI.

I BECOME A MEMBER OF A PROFESSIONAL CIRCUS COMPANY AND TRAVEL WITH THE SHOW . . . . .	64
--	----

## CHAPTER VII.

IN PREPARATION FOR BIGGER PUBLICS . . . . .	73
---	----

## CHAPTER VIII.

I PUT MY PROFESSION TO A NEW USE . . . . .	82
--	----

## CHAPTER IX.

MY FIRST YEAR AT BOWDOIN COLLEGE . . . . .	89
--	----

## CHAPTER X.

THE PROGRESS OF GYMNASTICS AT BOWDOIN . . . . .	97
---	----

## CHAPTER XI.

GYMNASTICS AT MEMORIAL HALL . . . . .	106
---------------------------------------	-----

## CHAPTER XII.

THE BIRTH OF ATHLETICS AT BOWDOIN . . . . .	112
---	-----

## CHAPTER XIII.

THE MILITARY REBELLION AT BOWDOIN—1873-1874 . . . . .	119
---	-----

## CHAPTER XIV.

MY LAST YEAR AT BOWDOIN . . . . .	126
-----------------------------------	-----

## CHAPTER XV.

FAREWELL TO BOWDOIN . . . . .	131
-------------------------------	-----

## CHAPTER XVI.

AT YALE . . . . .	136
-------------------	-----

## CHAPTER XVII.

YALE MEDICAL SCHOOL . . . . .	142
-------------------------------	-----

## CHAPTER XVIII.

NEW YORK . . . . .	145
--------------------	-----

## CHAPTER XIX.

A WINTER IN NEW YORK . . . . .	150
--------------------------------	-----

## CHAPTER XX.

CHAUTAUQUA . . . . .	157
----------------------	-----

## CHAPTER XXI.

CAMBRIDGE . . . . .	165
---------------------	-----

## CHAPTER XXII.

MY FIRST SEASON AT HARVARD . . . . .	173
--------------------------------------	-----

## CHAPTER XXIII.

THE DEVELOPMENT OF GYMNASIUM APPARATUS AND THE CON- SEQUENT PROBLEMS . . . . .	182
---	-----

## CHAPTER XXIV.

THE CONFLICT BETWEEN BUSINESS AND PROFESSION . . . . .	189
--	-----

## CHAPTER XXV.

THE CALL FOR TEACHERS AND THE ESTABLISHMENT OF THE SARGENT SCHOOL . . . . .	196
--	-----

## CHAPTER XXVI.

THE HARVARD SUMMER SCHOOL OF PHYSICAL EDUCATION— SUMMER OF 1887 . . . . .	206
--	-----

## CHAPTER XXVII.

LESSON FROM THE HARVARD SUMMER SCHOOL . . . . .	213
---	-----





# INTRODUCTION.

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No man can write the story of his life without revealing his character unconsciously, however guarded he may be, and in this autobiography the truth of this fact is shown again.

Dr. Dudley Allen Sargent was a combination of the scientist and the artist which approached genius. The prodigious labor of collecting and classifying statistics in his monumental work on the Anthropometry of college students was to him a pleasure rather than drudgery, and his heroes were men like Galton, Roberts and Quetelet, scientists whose example he sought to emulate. The thrill that he had from doing or watching the accomplishment of some intricate or delicate gymnastic feat, his appreciation of the perfect balance, rhythm, timing and judgment of muscular acts as described in his story show a deep-seated and genuine artistic impulse.

Dogged determination, linked with teeming imagination, was the keynote of his whole career.

If a complete record were made of the long series of ingenious mechanical devices designed by him for adapting exercises to the changed conditions of modern civilization the list would be astonishing. They must be hundreds in number. The Inomotor was a conspicuous example. This portable machine could be so geared that a four-mile boat race might be rowed in a hundred-foot gymnasium, and it could be so set that antagonistic muscle groups, flexors and extensors or flexors or extensors could be employed alone or in any combination.

The games that he developed to cultivate alertness, speed and agility have passed into the repertoire of Physical Educators or have been the starting point for others that are now in general use on every gymnasium floor and playground.

Anthropometry appealed to him as did no other science. His mind was that of a Huxley and his library was rich in the works of Charles Darwin, Francis Galton, Herbert Spencer and the other great educationalists of that period. It was the reading of their works that inspired him early in his career to begin the patient accumulation of the measurements that resulted in the charts showing the dimensions of the American students, both male and female, year by year, from the age of sixteen to twenty-three. These charts must always remain a standard of comparison for future observation and have already proved their use in the twenty-five years since they were published. His interest rested especially in the variations from these established types and the collection of his photographs, taken under his own eye, included the champion boxers, wrestlers, jumpers, sprinters and acrobats of his time: all this material in preparation for the great book on Anthropometry that remained but a dream through his whole life.

His Belfast days of boyish adventure and the experiences of his circus life led inevitably with him to designing means to meet the calls of Physical Education then beginning to attract attention and especially to the modifications in the older and cruder methods to fit the requirements of the weak rather than the strong, whom he always maintained could take care of themselves.

His friendship with William Blaikie, the author of "How to Get Strong," was another inspiration to him and led directly to his great chance in the educational world that came with his appointment as Director of the Hemenway Gymnasium at Harvard in 1879.

A glance at the contributions made to the cause of Physical Education under his direction at the Hemenway Gymnasium shows what an extraordinary influence his work had on the training of teachers. This contribution of his never had the recognition from Harvard men that it so richly deserved in spite of President Eliot's unwavering support, although in May, 1914, the Editor of the Harvard Illustrated writes,

"The time has now come when this work must be suitably housed in proportion to its rapid growth and official recognition as part of the activity of the University." Perhaps it was due in part to his failure to identify himself more completely with the Medical profession in Massachusetts, his most serious error in judgment and one which undoubtedly told against the standing of this new intruder into the educational family.

By that time 789 Directors had been trained for Colleges, Secondary Schools and Public Schools, not only throughout the United States but in Canada, England, France, China and Japan, and his Normal School, directed and financed by himself had assumed a leading place for training teachers of Physical Education.

I first met him in 1900 when, as a medical student I took his course at Harvard Summer School and there then started a friendship that was to last throughout the rest of his life.

My impression of the doctor at that time was of a man who was overtired and fagged out by trying to do too much. He planned enough work for a dozen men, but he was overwhelmed by the inconsequential details of his college and school-work, drudgery that he was temperamentally unable to delegate to others. As he himself has said, "Through life I have tried to deliver papers while I have driven a cow to and from pasture."

This mental weariness from overwork was responsible for the fugitive and fragmentary character of much of his writing. He never could take the time and devote the necessary energy for the great and comprehensive book in which he alone could have recorded the researches of his professional life.

He was at his best among his students, and the Saturday excursions of the Summer School to the beaches about Boston were at once a rest and refreshment to him. It was there that one got to know the genial side of his nature, so often obscured in the smoke of controversy. In after years, when in New York, we were wont to steal an hour or two from Convention Meetings in which to prowl about, investigating

the haunts of the "Get Strong Quick" fakirs, the "Chest Expansionists" and such other apostles of long life by violent muscular contraction or relaxation as the public might be willing to pay for. He was like a mischievous boy on these occasions, only revealing his identity as a parting shot.

His final place in the History of Physical Education must be determined by future generations but it needs no prophet to foretell that it will be that of a pioneer, a thinker and a scientist.

R. TAIT MCKENZIE.

# AN AUTOBIOGRAPHY.

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## CHAPTER I.

### IN HINGHAM.

I WAS born in Belfast, Maine, on September 28, 1849. From my father, a strong and vigorous man, I inherited a good physique, a strong will, a fondness for physical activity, and a love for good reading. My mother's emotional and imaginative personality made me nervously susceptible and sensitive to people and to my environment. This nervous temperament of my mother, by off-setting many of my father's mental and physical characteristics, kept me ever at war with myself, whether or not, at that early stage of my development, I realized it.

My first home in Belfast was near the sea. The beaches and wharves were my playgrounds as far back as I can remember. I must have learned to swim when I was very young, for I have no recollection of the process of learning. When I could not have been much more than six years old, I distinctly remember coming up under a raft after a back dive. Young as I was, the episode instilled in me a wholesome fear of the water, and I never became a very expert swimmer. At the time, however, I was climbing about on the rigging of vessels in the harbor, and performing many boyish "stunts" ashore.

In 1856 my father died of an injury resulting from an accident. I was seven years of age. After his death, I was



placed with one of my father's relatives in Hingham, Massachusetts.

It was there I went to school for the first time. My first recollection of my school days is concerned with being dragged from the play-ground in a neighboring field, to the school room, where, in no uncertain manner, I was shown a seat, and told to sit still. Because I failed to carry out this order, I had to stand for a specified time, beside the teacher's desk, and hold my arms out straight from the shoulders, parallel to the floor. Later they made this requirement more difficult, sometimes by placing a book in my hand, and ordering me to maintain the original position of the arms. An older boy, with a stick or a pointer, frequently touched up my sagging elbows, so that I should keep my arms straight. I do not know that this kind of treatment did me any harm. Probably I deserved all the punishment that I received. However, my temporary guardians must have regarded this treatment as a little barbaric, for I was soon taken from the public school on the hill, and placed in a small private school near the central depot.

The teacher who inflicted this punishment may not have had a premonition of my future bent in life; but she certainly did give me a forceful object lesson along gymnastic lines, to prepare me for my life work. In all seriousness, it did prove valuable to substantiate, in a negative way, my later theories in regard to the physiology of exercise, and as an example of how not to enforce school and college discipline. This early school experience played its part, along with the many others which I was destined to undergo in Hingham, to help prepare me for my career.

A love of adventure, encouraged by an inherent restlessness, began to show itself at this time. Under its wild instigation, I joyfully hunted for chances to endanger my life and limbs. Swimming, boating, skating, and snow sliding were some of the sports in which I took particular delight. Now, under proper conditions, these sports are safe and highly beneficial for boys and girls. I cared little for them unless

there was an element of daring and uncertainty. Swimming in the surf, where there was a strong undertow; diving from wharves into water varying in depth from 3 to 20 feet, and competing particularly to see who dared dive into the shallowest water; sliding down hill across railroad tracks or public thoroughfares; skating in mill streams or ponds where we knew the ice to be either thin or filled with air holes; these were some of the conditions under which we all vied, and frequently bled. And what sports without these little touches of danger and risk will interest the venturesome boy? And what is a boy without this love of adventure and hazard?

One sport that I frequently enjoyed in Hingham during the winter season, and one that I have never happened to see practised elsewhere, was running on ice cakes in the old mill-pond. The ice was cut in cakes, so small that no single cake would hold up a boy of average weight. The spoils went to the lightest boy, who could run fastest. I had one experience on the old mill-pond that nearly cost me my life. I had wandered away from the other boys, and was doing a bit of exploring for myself. Curiously enough, I had filled my pockets with mussel shells, and was skating about on a lonely part of the pond. Suddenly I struck an air hole, and before I knew what had happened, I was under the water. The thin ice around me, which I clutched, broke away under my grasp. The shells in my pocket added to my weight, and dragged my clothes down round me. My strength was nearly gone, when I made a last effort and caught the heel of my skate in the ice beside me. I gradually lifted myself up and rolled out on the surface of the ice, and kept on rolling until I reached the thick ice and safety. On that day, I had learned a valuable lesson.

Hingham, in those days, fitted out a good-sized fleet of fishing vessels, and the stories of the old mackerel fishermen filled me with delight and wonder. All the boys resorted to the wharves at playtime, and the lucky man who got a job working for these great seafaring men (for they were great in our eyes) was an envied being. Our lives were colored

with the romance of the sea, which always envelops a small port like Hingham, with its fishermen and fishing smacks, more completely than it ever could a great port with huge vessels and great enterprises. Here there was no commercial flavor, unless it were the smell of the fish. Here the sea was mysterious and portentous; for few had actually travelled to the great land that we knew lay hidden beyond the horizon. Every one of us intended to, however; and against that future day, we learned to scull a boat, with one oar in the stern, in preparation for the time when we should be cast adrift on cakes of ice in the old mill-pond.

Inspired by the fishermen's stories, and by our boyish and vivid imaginations, we frequently borrowed boats and set sail to cruise the harbor. If by any chance the tide went out, and caught us marooned with bare flats between us and navigable water, we courageously sought shelter for the night on one of the neighboring islands. I have a vague recollection that these nights on the islands were not wholly unpremeditated. Shipwrecked and cast upon foreign shores, we usually added a bit of realism to the adventure, by a strange metamorphosis. No one ever heard of an island in the South Seas that was not populated by cannibals. It was the work of only a few moments to turn into wild men. We coated ourselves with thick layers of black mud from the flats and stretched out in the sun to let it harden. Nor could we wash it off until the tide water ran in again. For a few happy hours we pranced about, wilder than the wildest cannibal that ever devoured a human.

The joys of these pretended sea voyages made us all eager to undertake more serious hardships, and to test our strength by more vital experiences. The report of a great storm at sea brought us all hurrying down to the beach to watch the waves hurled up on the sands by the powerful winds. We thought of the plight of sea-faring men with mingled sympathy and envy. If the storm drove unfortunate coasters upon the beach, our wonderment grew ever greater, and our curiosity and wanderlust grew accordingly. We thought

of the sea as a great mystery, powerfully dangerous, but as powerfully interesting. As almost every boy who grows up on its shores, watching the vessels come and go, hearing strange tales and seeing the ocean in all its moods, turns toward a sea-faring life at some time or other in answer to the great call for adventure, so we yearned to know its mysteries.

In pleasant weather the stirring call of the deep lured us with a different attraction. We forgot the mystery of the ocean in the magnificence of the amusement parks at Nantasket and Cohasset. The swimming beaches in these vicinities attracted bathers and picnickers in 1858 and 1860 as they do today. Between Hingham and Nantasket, there was a summer hotel, called, I think, "The Old Colony House." Behind it, in a grove, city people lunched and played in its dance-hall pavilion, on its merry-go-round, swings, and "teeters" as the boys called the see-saws. These novelties offered great entertainment to us, when, as run-away school boys, we wandered down to the grove to go the rounds, and to watch the city folk from Boston and its nearby towns. We saw fellows with their best girls, and girls with their melancholy love-sick men. Jam, sponge-cake, and sentiment seemed all mixed together. The atmosphere was too sticky to attract us for long, and soon we turned away from softer civilized things to more manly pursuits. We became wild men or Indians, according to the mood of the moment, and turned from "mushy" picnics and Sunday School excursions to hike along the shores of the sea, back to our daring adventures.

On a high rock near Nantasket, we set up a look-out. We observed and speculated upon the ships and steamers that sailed along the horizon, returning perhaps from some foreign shore. Here were real men who had done real things. We thought more of them than of our love-sick, handsome, young dandies, with sick mouths and languishing eyes. In our fancies we were masters of square riggers, sailing from foreign lands with pearls and gold and a confusion of all the



best things of life, which always included a few wild men. In reality, we were dirty little urchins, stopping in our games — those games which every child before us had played, and which generations to come were to play even as we — to peer at a great ship sailing by in the distance. The ocean called us, but we could answer only with our spirits.

We were particularly fortunate that our surroundings lent themselves to our imaginative adventures. The long sand dunes, the frequent clumps of sage brush, the gray witch grass were all a perfect background. And at twilight it was the best. The flickering light cast over it all a weird and uncanny haze. We were truly in a land of dreams.

But do not fancy that we were dream children, or that we moved about, beatified by our imaginative fancies. We were healthy and practical. We desired tangible play as well as pretended adventure. We bent our energies to construction as well as speculation. Clam-bakes were a favorite form of gastronomic pleasure. They were cheap and entertaining at once. The fire which they involved was an interesting potentiality. One of these occasions stands out clearly in my mind. A wind sprang up shortly after we lighted our fire, and our innocent little blaze began to assume the sise of a conflagration as it spread in the surrounding grass. It leaped from one clump of sage to another, growing beyond our control. At first we were terrified at the sight of the flames darting from one clump of dry grass to another, but as it grew, we began to enjoy the spectacle. We had at least started something rather magnificent and dangerous. Of course it burned itself out, when it had consumed all the beach grass within its reach, and it proved to be of little consequence. I shall never forget those flames lapping along, nor shall I forget the terrifying delight with which I watched them spread along the beach. Inconsequential enough, it is one of the most vivid remembrances of my days in Hingham.

As I think of that beach with its clumps of grass and its narrow strip of shining pebbles laid bare at low water,



another experience very different from the conflagration comes to my mind. On one of our run-away hikes, another lad and I went on a search for a certain kind of bright colored round pebbles that looked like marbles. We walked along the beach for a long way, but, except for an occasional shell, our trip was a failure, geologically speaking. Only sand and sand and more sand, with never a pebble in sight. Finally my companion in crime suggested a stretch of beach southward toward the ledges at Cohasset. When we reached the spot it fulfilled our fondest desires. No beach ever offered such a multitude and variety of treasure. I began picking up stones and putting them in my pocket. Each one I found seemed prettier and more desirable than the one before it. There was a red stone, round as a ball, and smooth as the white china knob on our front door. I kept adding to my store until the tragedy occurred. The pocket in my little gingham suit gave way. The stones rolled out. This was indeed a serious dilemma. I wanted every one of those stones, some for myself, some for my aunt, and some for my grandmother. My only pocket was gone. The alternative of a shoe or a stocking or a hat was out of the question; for we were not burdened in those days with such paraphernalia. With the wealth of Cræsus piled before me, extending on all sides, I had to sit down and make a selection. I handled the pebbles lovingly, as if I were a miser perusing his nuggets of gold. All I could carry, I had to take in my hands. The mental anguish of that decision, choosing which I should take, and which I should leave, comes back to me today. Each stone attracted me for a different quality. It was my first lesson in selection. I can remember now how I argued the selection and rejection. Trivial as it may seem to many, it was portentous to me. At the moment, it was facing life, giving up many things I had longed for, in order to retain those things that would be more permanently satisfactory. If this early start in making decisions could have been discovered and developed, my efficiency for later service would have been greatly increased.

At this time in my boyhood, there was a great rivalry, which all the boys followed with fierce partisanship, between the different fire engine companies of the neighboring towns. Each boy had his favorite engine, and selected his associates from its followers. We cheered them and fought for them, as boys today support their school teams. Each one of us knew the history of his engine far better than he knew his lessons at school. Many a free fight arose from the claims made by the supporters of the fire companies, and the boy who would not participate in the fracas was a coward, and the man who did not follow his apparatus to every fire was the worst sort of slacker. My favorite "tub" was called "The Extinguisher," and great was the glory thereof. I remember following the engine one night from Hingham Cove to Quincy, a distance of miles. At this time I could not have been more than eight or nine years old.

The fires at that time sprang up so frequently and so nearly simultaneously with the boastings of our fire fighters that there has always been a vague, though unsubstantiated connection in my mind between these conflagrations in wood sheds and out-houses, and the high spirit of rivalry which flourished in the voluntary companies of the competing fire engines. Their methods were crude and often inadequate, but they faced the serious problem of fire in the only way practical at the time, and they did save much property. More important, however, was the wholesome spirit of adventure which they provided for the boys. Pent up energies found a useful and always interesting outlet, and men were frequently made by this simple service.

These fire gangs were amalgamated into sharply divided larger gangs, a division which often proved more dangerous and less educative than fire-fighting. Any affair which brought these various sections together invariably ended in a free-for-all, mass fight. This antisocial habit never gained so great a hold in Hingham as it did in some of the larger towns. On one momentous occasion, about this time, I was visiting relatives in East Boston, and saw my first

large mass fight. An affair in Chelsea, which attracted people from all about, proved to be the meeting place of the factions. Two men of rival groups started fighting. Like a thunderstorm, the crowd broke loose with stones and brickbats. Although I do not recall how I came out of the melee, I know that I came through without serious injury. I shall never forget that mass fight. Cuts, scalp wounds, and bruises were dealt out indiscriminately. It was a wild, mad scene.

My entertainment, however, did not consist wholly of fighting and watching fights. Some sports attracted me in themselves; others simply satisfied the love of destruction which every boy possesses to some degree. One of our favorite pastimes was a fore-warning of my later fondness for mid-air gymnastics. We used to run and jump from the top of a little hill just above the old mill-pond into the sand of the steep sloping hillside. The drop through the air was long enough to give the sensation of flying. The exhilaration of the rushing winds in my ears fascinated me.

That destructive propensity, of which I spoke, was quite satisfied on one memorable occasion. Behind our house in Hingham was an old dilapidated barn, an eye-sore to all the grown-ups. For a long time the boys used it as a social center and also an improvised gymnasium, where we played follow-the-leader and hide-and-seek. Part of the roof was gone, and on the sides the timbers were bare. For a long time we expected a windstorm to blow it down. Then came the brilliant inspiration. Why should we boys not tear it down ourselves? The only fly in our ointment was the absence of any adult objection. In spite of this indifference on the part of our elders, we went to work. The loose boards and the shingles came off easily enough, but the destruction of the frame presented a more serious problem. The timbers, hand-hewn, braced, and held together by hard wood pins an inch or more in diameter, stood firm. We had no tools or mechanical devices to help us. An old rope was our only tackle. Every Saturday afternoon and at any play-time that came during the week, we gathered in conference to

consider our engineering problem. Finally, after repeated trials and failures, we found that the farther we fastened our rope from the joint of the timbers, and the nearer we could get to the loose end of a beam, or the higher we could fasten our rope on the frame work, the more easily could we move our barn. Profiting by this discovery, we secured a long rope, and went part way up the hill to get a more direct pull. Even this expedient was not sufficient. It lacked the next step which was to train a large crowd of boys to pull together. At last we brought the old barn down.

Another experience that I had in Hingham, and one that involved a little work, was rather more humorous. I wanted some spending money. Consequently, I contracted to take a newspaper route, and at the same time, for both profit and amusement, to drive a cow to and from pasture. The road from her home to her pasture lay along my journalistic tour. I started in Hingham, and my destination was Downer's Landing, or Crow Point, as it is now called. The houses at which I delivered were scattered along the way. The scheme would have worked admirably if I could have made the cow understand. If she had been content to wander along, or even to wait at the gate for me, while I delivered the papers, all would have been well. However, she could not be trained. While I went up to a house, she either wandered into the woods, followed me to stop in the garden, or trotted off to some one else's back gate on a tour of horticultural inspection. Like the milkman's horse, she knew my stops, but she looked on them as signals for her to start on care-free peregrinations of her own. I must have tamed her to a certain extent; for I carried this double job throughout the season. But I failed to learn the lesson, that to do two things at a time means to do justice to neither. Through life I have tried to deliver papers, while I drove a cow to and from pasture.

Another way that I had of expending surplus energy and earning a bit of money was to fill the water barrels of the fishing vessels. Although I expected and earned some compensation, sometimes the gratuities were not forthcoming.



However, I had the pleasure of being connected with a boat, and the pumping was excellent exercise.

At home my less strenuous moments gave me opportunities to follow where my fancy listed. I relaxed, and indulged in quieter occupations. On rainy days, I used to ransack the old trunks in the garret, and the old curios delighted my soul. Sometimes, from a few odd wheels, I constructed wonderful and powerful machines. The more I ponder, the more convinced am I of my inherent destructiveness, or curiosity, if we care to call it by a kindlier name. My greatest joy always was to take my toys apart to see the insides. My efforts to put them together generally failed, but my curiosity was appeased. Express wagons and carts went the way of clocks and machinery.

I never sat still at one thing longer than when I was drawing. I inherited some talent from my father, and naturally enough, I concentrated upon ships and vessels for my models. Whether I copied his drawings, or whether I observed at first hand, I do not remember. I do know that I drew constantly for a few years. These artistic proclivities found vent also in scrap-books, made from papers and magazines. I made panoramic views out of old pictures, by pasting the latter side by side on long strips of paper. Although I tired of my artistry, my drawing served me to good advantage twenty years later when I was designing gymnasium apparatus.

I had my pets on whom I lavished my youthful affection. My great ambition was to make a cat, a dog, and a pigeon live in harmony. But cats and birds do not agree, and puss ate the pigeon. I fancied that I was justly rewarded for having stolen the bird from its nest. A little while later, the dog died from over-eating. I shall never forget my desolation. I have never since owned a pet of any kind.

But these quiet moments were by no means in the preponderance. Larger movements which gave an outlet to my pent-up energies, afforded me greater satisfaction. Whether these activities became constructive, destructive,



or explosive, depended upon the merest chance; for my feeble old aunt was hardly strong enough to control and direct them.

The great comet of 1859, sweeping half way across the sky every night, filled our minds with "wars and rumors of wars," that were soon to come upon us. Filled with boy-like superstition, I believed in the signs of the times. I had been away from home four years, and while I remembered few of my relatives and playmates, and although I had no home awaiting me, I wished to return to my native town of Belfast. If I had learned little at school, I had acquired some worldly experience by knocking about with men and boys. This practical training, already stamped permanently on my character in spite of the fact that I was only ten years old, influenced my professional life and my future work profoundly. I shall try later to draw the pertinent parallels between Hingham and what came after.

## CHAPTER II.

### IN BELFAST.

IN 1859 I did leave Hingham to return to Belfast. My new home was with my widowed mother, who kept house for Mr. and Mrs. Cad Hayford, whose son, Axel Hayford, had married my mother's sister. Certainly in my own estimation, I was at this time travelled. I fancied that I had knocked round enough in the great outside world of Hingham, Cohasset, Nantasket, and Boston which I visited once or twice, to have acquired the air and knowledge of a man of the world. Tested from a scholastic standard, however, the situation was different. It was ignominious, indeed, to find that I was not even up to the boys of my own age in school. Much as I resented and railed against the stupidity of those in authority, I went into a grade of the grammar school with boys two or three years younger than I. My associates were, of course, boys in a class or two above me. In my own grade, unfortunately, I did not have enough to do to keep me out of mischief. The circumstances did not make for serious study.

The school in which I started was known as the Intermediate School. I soon left that for the Select School. There was practically no chance for physical activity connected with the curriculum. At recess, in the springtime, we tumbled about in our own games of hide-and-seek and leap-frog. We competed in the usual stunts, turning hand-springs, cart-wheels, running and jumping. I remember that I was the first to try back-hand springs. For want of a mat to land on, the boys obligingly lay down on the ground, and let me turn over on them. In the winter, we skated and coasted and snow-balled. Never did a town offer better opportunities for

coasting than Belfast. The school building was surrounded by hills. We frequently had ice for skating. In Maine, Nature is very generous in the matter of winter weather.

While I was in this Select School, I started my first gymnastic innovations. With some other boys, I had a horizontal bar erected on the lower common. The High School then was equipped with a set of high parallel bars, a tall pole for a giant's stride, and a series of three poles with cross bars at the top for swings, rings, and trapeze bars. The equipment was magnificent in my eyes. Our horizontal bar was unique, however; for, while all the apparatus at High School was made of wood, ours was iron. Its chief advantage was that it was small enough around to grasp comfortably, and at the same time strong enough to support the weight of several bodies at one time. The wooden bars, though tough enough, had to be made too large for a comfortable grasp. The chief disadvantage of our bar became apparent in the winter. Unfortunately the frost made the apparatus stick to the hands. The result was that in one contest all the boys who took part lost patches of skin as large as a quarter of a dollar, from the palms of their hands. But even in mild weather, this apparatus was used very little. Even the more magnificent High School equipment was generally deserted. The giant's stride, which was popular with the smaller boys, seemed to be the only permanent attraction.

But in these days, we had more serious matters to consider than sports and playtime. The oncoming Civil War sobered the most irresponsible of us. National energy turned toward military training. Even with this movement came the great discovery which bore down upon us again in 1918, that a huge percentage of our young men were physically unfit. In 1861, we could not select our army with such scrupulous care as we did in the World War, and fit and unfit were thrown into squads to go through a bit of rough training and to learn the manual of arms. Long before the first bewildering newness of training wore off, those lads were rushed to the front, often to die before they had learned to shoulder arms properly.

Those early days moved so swiftly in a blinding panorama of action, that they come back to me as a hazy confusion of stirring scenes, of mad, breathless preparation, days filled with hope and agony and fear. I remember the raw recruits drilling on the common, marching and going through the elementary formations; I remember the great rallies that stirred me to the depths of my being; I remember listening to the inspiring music of the bands, as it beat the departure of our young manhood of the North to fight that of the South; I remember following the few I knew to the enlisting offices, seeing them sign up, to become one of the raw recruits on the common; I remember seeing them depart, and later some of them coming back wounded, or worse, stricken with awful diseases. The Civil War was nearer to us than the World War. We realized it because a strong censorship did not keep the public from knowing and seeing. News travelled to us more quickly when it did not have to cross an ocean. Our anxiety was never at rest for a moment. We saw the immediate results of war. Yet, in spite of its reality, there was not one of us who would not have gone gladly had he been old enough to get into the service.

In the atmosphere of wild excitement, it was impossible for the boys and girls to jog along in the commonplace rut of school. We lived and breathed nothing but war. Returned soldiers told of their personal experiences, while extra bulletins proclaimed battles lost or won. We were not old enough to go to the front, but like all boys in their early teens, we had heard of some wonderful exception made for a mythical person, no older than we; and basing our hopes upon such phantasmal chances, we secretly watched for our opportunity to become General Grant's aide, or even General Sherman's drummer boy! In time of peace the average number of boys and girls who go through High School is small. But in that time of war the pupils dropped out in amazing numbers. Discontent was the touchstone. Everyone craved action. We lacked all interest in our educations. Such a lack of interest is not uncommon in the young; for,



with the glowing vitality of youth, all knowledge which is not directly applicable to needs, is superfluous. Before young people reach the stage where they see actual constructiveness in their school work, they are likely to be discontented, and very likely to be disinterested. There is nothing gripping in Algebra and Latin for the large majority.

I imagine that it was this lack of interest, increased by the restlessness inherent in the war, that caused me to leave school when I was thirteen years old, in 1862. I went to work on the government battery, which was being constructed near Patterson's Ledge in East Belfast. My uncle, Mr. Hayford, had the contract for this construction, and through him I stepped into a man's job. I worked with a pick, shovel, wheel-barrow, and a heavy wooden maul. I was paid \$1.50 a day, man's wages, for my efforts, and I tried with all my might to do a man's work. The tools which I handled were used in rotation. This scheme kept one man from tiring of any one kind of labor. A man who was weary of shovelling exchanged his shovel with a man who was tired of his pick. This system accomplished a great deal of work, and seemed to eliminate much fatigue.

One foreman in charge of the pounders or maulers devised a scheme, consistent with the times. He lined up his fifteen or twenty men, and put them through a regular drill, in which each man pounded in perfect rhythm with his neighbor. When one stopped, all stopped to rest. After a few minutes, the work would commence again, all in perfect unison. It was an enviable lesson in efficiency, applicable to modern times. Would such a scheme not work effectively in our municipal street service?

The batteries were completed in 1863, and I returned to the Select School. I was under women teachers again, but now, at the age of fourteen, for the first time, I took school seriously, and began vaguely to understand what a school was for. Probably the manual labor which occupied my spare time sobered me to a realization of the necessity of a good education.



At this time of my life my diary records what a typical young fellow I was by such remarks as "Had a cigar," "Down street in the evening," or "Played cards up in Moses' room." I also reflect the spirit of the young blood by a note of having had the gloves on with Murphy, and later, of walking round the square. How I found time for these trivialities puzzles me; but I find few youngsters who do not make time for their fancies and fads. My smoking and card playing began and ended that year, but my boxing was destined to be a more permanent fixture. Perhaps its permanency had some connection with my giving up smoking. Another amusing entry in my diary was that of the day when I "Shaved with a razor." What I had shaved with previously, I cannot say. I balanced this occasion with an item of note the next day. I lifted 300 pounds of nails. I was indeed a man! I weighed 140 pounds; more than the average weight for my age.

At this time I began practising more or less systematically with dumb-bells and Indian clubs. I found a book entitled "The Family Gymnasium" which interested me greatly. There was a picture of an Englishman, named Harrison, so well do I remember the book, who was swinging a pair of Indian clubs, each of which weighed 37 pounds. I regarded this man Harrison's physique with envy; Indian clubs became immediately necessary to my happiness. Out of a piece of cord wood, I sawed two clubs and finished the handles with a hatchet and draw-shave. Completed, my toys weighed about 20 pounds each. At fourteen years I began to use these monstrosities regularly. Of course there were only one or two movements which I could achieve with such unwieldy weapons. Although these clubs were much too heavy for general use, they gave me unusual strength in my shoulders and chest. The other extreme, to which people have gone today, of using 1 or 2 pound clubs for school and college gymnastics, is equally undesirable.

Speaking of gymnastics, one of our favorite school stunts was to see who could jump the farthest after swinging back and forth on a rope. But the great test of courage and

strength was of a still more aërial nature. The Unitarian Church, opposite the school, had a lofty steeple; we used to try climbing it. One schoolmate, Justus Lewis, was the only boy whom I ever saw accomplish the feat. Later he lost his life on the Pacific coast, while trying to save the life of another. I remember that as a boy he was a born athlete.

Since school occupies only a few hours each day of the boys' and girls' time, and since the school term allowing for week-ends and holidays is in all little more than half the year, the influences outside of school hours play a large part in moulding the lives of young people. The natural conditions of a town, and even those which are accidental, shape the activities of the youth of a community more than any other factors. Belfast, spread over a series of low hills, sloped up or down at every angle, from the gentlest to the steepest. Even if they realized it, few of its inhabitants would have acknowledged the constantly enforced climbing as the matchless if wearisome agent which maintained a town full of healthy citizens. But in winter, the young people, at least, keenly appreciated the rolling landscape. I have never known better coasting than we had over those white hills, nor better coasters than we were. Night after night, with a starry sky overhead, we plodded up the inclines to fly down again on our sleds. The ascents, which might have been tiresome had we stopped to consider them, were chances to harangue one another on the respective merits of our sleds. No race-horse owners ever backed their studs more steadily or vigorously than we did ours. We picked our favorites; there was "Old Ironsides," and "Dreadnought," and "Speedwell," and a dozen others. There were always interesting problems to be considered. Some insisted upon a full-round or half-round shoe, while others recognized only a flat runner. Then the question arose in regard to the desirability of a narrow or broad seat on a stiff or rickety frame sled. Great were the battles that ensued! And, as today, it was always difficult to make the defeated boy realize, and more difficult to make him acknowl-

edge, that the victor was the more skilful in the race. The old alibi of luck always loomed portentous.

Speedy coasting was, however, a science, not a chance. A method, just as scientific as the rules of any sport, appertained to this game. The coaster grasped his sled with the right hand on the 'right side of the front bar, and the left hand on the rear bar near the left side. With the sled held in this manner before him, he ran at top speed, and threw himself and the sled forcibly forward. He lay on his right thigh while his left leg trailed behind as a rudder. The right hand, changed to the left side of front bar, brought the weight of the body full on the right forearm and elbow. Everything depended upon the skill with which the racer threw himself, and the speed at which he could run to get a flying start.

No one can deny that, like the great Nordic races, northern New Englanders as a class have profited by the opportunities for skating, skiing, coasting, and snow-shoeing. In skating, swimming, and boating, the youth of Belfast in my time did not equal the achievements of other communities. Here again is seen the influence of environment. It was impossible for a person to stay in our icy water long enough at one time to practise the different strokes, or the variety of dives, dear to every American boy. You cannot become proficient when you are paralyzed with the cold air and cold water. The roughness of this same water made rowing and sailing for pleasure unattractive. Our skating was impeded because we had no accessible river or pond with smooth ice, and what ice we did have, generally lay under a thick covering of snow. Belfast lacked grace on the ice, and could boast few fancy skaters, but it was peerless in New England, when it came to coasting. Other communities, with greater facilities for a variety of sports, undoubtedly showed better results in their output of hearty and healthy athletic boys and girls.

The moral aspects of these natural sports are of grave significance. I mentioned the girls coasting, and I remember them dancing and skating. Otherwise I can think of no

sports in which girls took part. As for the dancing, it was the usual conventional school type, conducted more to teach social dances and ball-room etiquette, than to allow any motor outlet for pent-up vigor and feelings in which young people in their early teens abound. Small boys and smaller girls, dressed up to look like little men and women, schooled with all the airs and graces of grown-ups, and sent to smirk and simper at dancing school, are not being prepared, at least consciously, for the best sort of manhood and womanhood. This hot-house physical education only wakens and stimulates a sex consciousness at a time when boys and girls should be unaffected and free. The generally accepted and socially sponsored card parties and church sociables, with their kissing games and so-called dancing, perniciously weaken the moral fiber of strong, healthy, clean boys and girls. And the next morning, the sight of the same object of feminine loveliness, to be sure not quite so lovely in long-legged gingham and pig-tails as she was in fluffy party muslin and curls, but alluring still, is not conducive to lightning calculations in arithmetic, nor to faultless spelling. It puts an undeniable "crimp" in the three R's. Yet the elders approved and applauded; and the girl who had the effrontery to engage in any form of athletics more strenuous than the polka or the schottische, or an occasional coast, was a hoyden or a tomboy. No one seemed to realize that there is a time in the life of a girl when it is better for her and for the community to be something of a boy rather than too much of a girl.

From this paradox of boyhood many of us emerged, as I have hinted, and with the progress of the war grew to men before our time. We skated and danced, but life threatened us increasingly with new problems and graver responsibilities. We were ready to undertake more serious contests than coasting.



## CHAPTER III.

### ABOARD THE "MOSES EDDY."—1864.

FROM the time that I did a man's work with my pick and shovel and maul, I constantly had some kind of a job, even after I returned to the Select School. Frequently I acted as janitor in the offices or stores of Belfast, tending the fires and wielding the broom. Besides this spasmodic occupation, I turned my hand to almost any odd job that presented itself. I chopped wood, helped on coal teams, worked on a hay press, was a lumber man for a while, and I even undertook farming. In short, I was a general utility man, ready to accommodate anyone who had a job for a boy in his early teens. I felt that I had become a grave responsibility; for I realized that I had to be clothed and provided with three meals a day. My variety of occupations was fruitful in experience, while the strenuous exercises developed my health and strength. Nevertheless, I longed for something more permanent and stable than these vicarious positions. In other words, I desired a profession. I began to consider a life's work. Now a city boy's aspirations range from the ambition to become a motor man on a street car, or a soda fountain clerk at the corner drug store, to being the chief of police. As a boy living in a small town by the sea, where I had but few openings for careers uniform or authoritative, I felt the usual and imperative urge of the sea. Bubbling over with energy and vitality, I saw, in this life, an outlet for my exuberant spirits. Besides, many of my family before me had been sea-faring men. I thought I scented the salt in my nostrils, and heard the deep calling me. Now I had a natural liking for the sea, but, at the same time, I entertained a wholesome and inherent dread of its unknown



potentiality. However, the lure was stronger than the dread; so, when I had a chance to try the life of a jolly tar, I hesitated only a little. To be sure, I did not long for the life as real sea-faring men before me had longed for it, nor did I disregard the dangers as I had done when a boy used to watching the ships pass on the horizon. In those days, the sea offered exciting adventure for men who were daring and brave; to me too it offered the chance for adventure, and, in my enthusiasm for trying something new and perhaps a little dangerous, I forgot the grave possibilities.

In my dreams of voyage, I had always journeyed in a fine square rigger, loaded with some vague but valuable cargo to be exchanged for spices and pearls and Oriental treasure. Consequently, it was a bit ignominious to set sail for Round-out, New York, in a small, clumsy coaster, loaded with barrel staves. Furthermore, the same barrel staves, put together and filled with cement were to be our return cargo. The cement was destined for fortifications along the Maine coast. You see, the war was still upon us.

The "Moses Eddy," our worthy craft, did not resemble the square rigger of my dreams to any alarming degree. The fact that she was a diminutive coasting schooner was emphasized by her squat appearance. Her width was the only square thing about her. She was unwieldy and was destined to prove herself queen of stubborn clumsiness before we returned. I was to know her thoroughly before we reached home. On August 3, 1864, I shipped aboard the good schooner as an able-bodied, but very fresh and inexperienced seaman, with a salary of \$14.00 a month. We had a captain, a mate, a cook, and a man before the mast. I was the man "before the mast," with duties which ranged from bow to stern, from keel to topmast. I found myself not only "before" but also behind the mast, up and down the mast, and on top of the mast. But my strenuous experience filled out the nautical niche of my life, and made me healthy and wise, if not wealthy.

Our first day proved to be a short one. Since no one could

whistle up a wind, we spent the night at Owl's Head, near the mouth of the Penobscot. Our regular watches of four hours on duty and four hours off began that night. At first it seemed strenuous enough; but I was to know duty far more exacting before the end of my trip. In the early morning we set sail again. The second day took us as far as Towns' End. A thick fog delayed us in the morning, and we remained at anchor until the middle of the afternoon. Never shall I forget that weary, dismal Sunday. For the first time in my life, I was home-sick, desperately and frantically home-sick. I escaped seasickness; but the malady which I suffered, intensified, or perhaps even brought on, by the depressing atmosphere and the cheerless suggestion in the name of our refuge, Towns' End, was as overwhelming and depressing as any physical ailment ever could be. Such a feeling of wretchedness I have never known, and never do I wish to know it again. The earth was a bottomless, murky sea, pressed into ominous stillness by a heavy, smothering fog. I was one small, helpless mortal clinging to a bit of wood, floating on the brink of destruction. If I could have made the shore, I would gladly have undertaken the hike back to Belfast. Any place that I could call home seemed wonderful indeed!

With the lifting of the fog my homesickness vanished, and with the stir of the wind I felt new hope and anticipation. Under a smart north wind we passed Portland lights and reached Gloucester Monday evening. In these first four days, I had learned pretty thoroughly what was expected of the man before the mast. Getting under way consisted of weighing anchor, and hoisting the sails, jib, mainsail, foresail, and gaff-topsail. Other odd jobs were coiling the halliards and loose rope, putting the deck in order, taking my turn at pumping and steering, and, of course, standing watch. In spare moments, the mate taught me the seamanship of ropes. I learned to make a long splice, a short splice and an eye splice. Knots held no mysteries for me. I learned to stop the end of a rope, and to whip and serve. At a glance I came

to know the age and quality of a rope, to say nothing of the relative values of hemp ropes and flax ropes, and cotton and Manila ropes. I knew the uses of all the varieties of ship-yarns and cordage. In short, I knew ropes. And all this, in my off time!

Early on the morning of August 9 we left Gloucester and passed Cape Cod lights at about 9 o'clock that night. During my night watch, from 8 to 12, I gazed at the clear sky and at the myriad stars twinkling in the whole sky. I remember how clear the air was, and how near the heavens seemed. Suddenly, as I lay watching the sky, wondering and speculating, a great flare of light, a veritable ball of fire, seemed to shoot at me from out of the blackness. In a moment, everything on the ship became as clear as in the middle of the day. The huge ball of fire, a few hundred yards astern, was following us. Now that I reflect, in cold blood, I suppose that it was as large as a hogshead; but at the time it seemed like a blazing planet to my terrified senses. While it was still in the air it burst into a thousand fragments which fell into the sea. I can remember no sound of any kind, but, frightened as I was, I might have missed the accompanying noise. Like any small boy, bred on yarns of the sea, I read in it some direful omen of disaster that was to befall us. Nothing very serious came of it, however. This strange thing occurred at about 11 o'clock, and the man at the wheel confirmed my observations. Probably, it was a large meteor, but it looked to us like a foretaste of Judgment. For the rest of my watch, I pondered still more deeply about the stars, and more especially about what held them in place. Were they quite secure? Were they worlds like ours? Was the life of a sailor all that could be desired?

The next day dawned with a sharp wind blowing dead ahead, and a rough, choppy sea. I had my first experience in prolonged tacking. We tacked all day. At 9 o'clock, we sought shelter for the night in the harbor at Holmes' Hole, Vineyard Sound. With many other craft we stayed at anchor all the next day waiting for the wind to shift. During

this respite, the mate seized the opportunity to instruct me in the lore of the sea. The lore in this instance was hard labor. He did not wish to chance my getting home-sick again while we waited for a fair wind, so he rigged a little rope boatswain's chair for me, and hoisted me up on the foremast, armed with a steel scraper. My chair was suspended from the mast-head by a tackle and fall, and as I scraped, I gradually lowered myself. It was intensive, though not unpleasant labor.

In the evening, we made a round of calls upon the captains of the other vessels that lay nearby. For the first time, I had a taste of the social life and the customary exchange of courtesies among sea-faring men. The strains of music from the ships, and the songs and shouts of laughter, drifting from one vessel to another, on that clear, beautiful August night, made the sailor's life very attractive, and made me quite content.

The fresh wind roused us early the next morning, and we set sail westward for New York. I shall never forget the bustle and geniality of the hundred or more men on the ships about us all scurrying about simultaneously to get their craft underway, hoisting sail, and setting them to catch a favoring breeze. To me they seemed like a great flock of lively birds, full of importance and vigor, spreading their wings in preparation for flight. Every vessel schemed for the most advantageous position in which to catch the wind. It was like life, as I think of it now, every ship maneuvering for the favorable position that comes by mere chance, none knowing from which quarter it would come, but all ready to jump at the slightest hint of favor. While I insist that I have always been impelled by some force within myself to mental and physical action, and while I have practised a reasonable amount of foresight and good judgment, yet I have always felt that I have been guided to a great extent by chance and good fortune. Like the ships, I have set my sail, and waited for the favoring gust to send me on my way.

The wind died down later in the day, and we had winds



varying from light and fair to dead ahead, until we ran into a thunderstorm as we were entering Long Island Sound. The storm came on at midnight. It was the first real thrill of the trip. In the inky darkness, we had to shorten sail suddenly and run under mainsail and jib. My job of taking in the gaff-topsail came uncomfortably near being my last. While I was trying to gather in the sail, and fasten it to the mast-head, in the pitching and rolling of the vessel I pulled off one of the cleats that held the clew lines, and fell over backward. Fortunately my arm hit a topmast stay that swung me round until I caught the other stay, to which I clung for dear life. Once on firm "land" again, my knees shook a little at the thought of my narrow escape. While I was swinging and clinging, I did not have time to feel any apprehension, nor to realize my great danger. But as I looked at the turbulent sea, and peered into the driving rain, I reflected on the small chances I would have had of being found, had I gone overboard. The storm itself, while everyone was safely aboard, was not terrifying. The blackness, the thunder, the white lightning flashes, the wind whistling through the cordage, stirred me to fight. I was encouraged and strengthened by the blowing of whistles and shouting of men from other ships that passed, fighting the same squall as we were. The tempestuous vigor of the scene drove out any sense of timidity. After the storm came a bright, clear day with a wind still dead ahead, and again I had a chance to receive instruction in the gentle art of tacking.

At Hell Gate, we took a pilot aboard to steer us through the narrows, into New York. The man was probably a trustworthy pilot, but he did not do all the steering. Those in command found it necessary for the cook and me to launch the row boat, in which we labored to direct our heavily laden craft through the Gates. The rocks in those days were partly visible under the water, and we had to pick our way among them. This rowing, under the direction of the cantankerous and mandatory mate who stood in the bow of the boat, acting as coxswain and general manager combined,



differed radically from any rowing that I had done before. This form of exercise, through necessity, became a favorite with the cook and myself. Finally we did get to Castle Garden, New York, off which we anchored for the night.

My first impression of New York's waterfront was a line of tall dingy buildings, rising behind a forest of masts. The masted shipping in 1864 was far greater than that which we see today; for the faster steamship has replaced the more picturesque sailing vessel. I gained my next impression when I went to the theatre in the evening with Captain Shute. We saw Tony Pastor and his variety show at 444 Broadway. Pastor was one of the first to popularize modern vaudeville, and his inimitable singing made him a great favorite.

A down-town Broadway theatre in midsummer would probably not be recommended as an ideal resort, but it was a blessed relief that night from the stuffy forecastle in the hold of the down-east coaster, where the smell of a whale oil lamp mingled with that of accumulated bilge water in a doubtful aroma. And it was good to get away from the comfortless association with the creatures that always insisted upon sharing your bunk with you. I understood the attractions of the gay city life for poor Jack Tar, who goes astray in the vast and cruel city.

With a favorable wind behind, we started up the Hudson the next morning. Before long, unfortunately, that wind died, and we had to anchor, and wait for the tide. In fact, this starting and waiting was our daily procedure until we were as far as West Point. As soon as we lay beside Storm King Mountain, we had an experience common to those who navigate the Hudson. The favorable wind suddenly changed, and as soon as we trimmed our sails to meet it, it would veer round to the opposite quarter. In a few minutes we had had wind from every side. Our compass was balked. The tide began to turn, and it was plain that we had lost control of our steering apparatus. But there was one good preventative. The cook and I took to our "shell," and by hard rowing,

succeeded in keeping the old craft off the steep rocks of the mountains that go down into the river almost perpendicularly. It seems incredible now as I look back upon it, but from a little before midnight, until 4.30 the next morning, the cook and I rowed against tide and wind. We kept the "Moses Eddy" off the rocks! And we even passed the mountains. I shall not describe the back-straining labor involved in trying to row a boat firmly "anchored" to a craft loaded with tons of freight. We felt no sympathy for galley slaves; they at least had the satisfaction of seeing and feeling their boats move! The only comment in my diary at this time was, "Towed her most of the way past Storm King, never turning in until 4.30." The next night I slept on deck, with my head on a pile of anchor chains, and I never had a more comfortable or enjoyable sleep. All of which goes to prove that to sleep well and thankfully, a man must be tired.

The rest of the trip up the river was uneventful. We stopped occasionally at night, and made good time during the day. When we arrived at our destination, Roundout, the cook and I cleared the hold, and helped load our cargo of staves aboard a canal boat. We learned that the crew of a canal boat (we were the crew of a coasting schooner) had only to pump and steer. Immediately, as salt water seamen, we felt ourselves imposed upon, and for our next cruise, purposed shipping on a canal boat, where we would neither row nor load.

Again the fear that I might grow uneasy during our wait in port inspired the mate to set me scraping. The rope chair and tackle were set up, and I went to work on the main-mast, so that it might shine as the foremast, which I had polished at Holmes' Hole. Fortunately our 800 barrels of cement came the next day, and we set sail for Portland, Maine.

All went well and easily during the first half of the return trip. Coming down the river into New York harbor we constantly met all kinds of naval craft loaded with soldiers. For a time, we had almost forgotten war, but now it came

back to us strongly enough as we sailed by West Point. Moreover, our cargo was going to strengthen Northern fortifications. Past forts and training camps we sailed out of this martial atmosphere with a smart wind that required only attention enough to work the ship. But this manual calm and fair weather regularity was short-lived. At Martha's Vineyard we ran into a northeaster. The natives at Edgartown, where we anchored, told us we were in for an "August twister." The term meant little to me when I first heard it, but much before we left our moorings. We were in port for eight days, regaled with a strong northeast wind and a steady drizzle of rain, interspersed with occasional down-pours.

If the mate had been a religious man, and he was not, or if he had been related ever so distantly to the weather man, I should have said that he had had a finger in this dose of weather in order to complete my nautical education. As far as scraping went, the only job left me was the main topmast. When the weather quieted a little, out came my rope chair and tackle, and up I went to scrape. Since it was a bit windy up on the main topmast, I completed this work with as little delay as possible, although my aerial work was not entirely distasteful to me. After the scraping, my guide and mentor gave me a chance to prove my proficiency as a student of ropes and their ways. For several days all hands helped tighten up the stays that brace the masts. My next selected task was to paint the ship here and there. I showed such skill in decorating the fore and main tops, and the bowsprit, that the mate collected everything on the ship that needed painting, and set me at it. Fortunately the anchor and chains were under water and out of reach. They were not painted.

For a few hours after the painting orgy, the mate almost despaired of a job for me; but he was ingenious. What could be better for me and the rigging than a little tar! Again the little rope chair put in an appearance. The mate mixed some tar for me, and up I went to the foremast head, rubbing

the soft tar in with my hands, as I worked down from my seat among the clouds. When I came to clean the tar from my hands, I feared that I was to be tarred permanently, and began looking round for the feathers. I had neglected to put grease on my hands, and no glue ever stuck as that tar did. I ate and smelled and breathed tar for days. Nor do I remember how I finally got it off. I imagine that it was a matter of time.

On the ninth day of odd jobs, the wind changed, and we started on our journey eastward. We crowded on all sails, and made as good time as we could with our heavy cargo. Although the water was rough, we sailed along more rapidly than at any other time. Just after we passed Cape Cod and Cape Ann, we ran into our first thick fog, with a rolling sea, and no wind. There was not even enough breeze to fill our sails. We could not keep the vessel under steerage way. Sails flapped, jib-sheets sagged, booms swung back and forth across the deck, blocks pounded, and the jaws of the gaffs squeaked with the heavy roll. Yet in spite of the noise and discord, there was no action aboard the good ship "Moses Eddy." I now understood the Ancient Mariner's predicament. Had I a gun, and had I met an albatross, I too might have erred. The hot summer sun, trying to burn through a Bay of Fundy fog, added to the stifling oppression. The life of a sailor was a bit hilly just then. Any kind of wind, even the wildest gale would have been welcome in that awful calm. To alleviate the heat, the cook and I, so my diary records, spent most of the day swimming in the ocean. For the first time I experienced the apparently greater buoyancy of deep water in comparison with that of shoal harbors and beaches.

Good sailing weather followed our calm, until we struck a second northeaster just as we sighted Portland Head Lights. This gale ripped our mainsail, so that we had to run under a double reefed mainsail and jib. Now reefing is not easy in good weather, but in a choppy sea with a high wind, and with rain and salt water drenching you continually, it is



doubly difficult. I practised 'all my recently acquired seamanship. Likewise I became philosophical. I took everything as a matter of course, and I even began to enjoy the rougher parts of sailing, when the sailor was called upon to wage war on rain and wind and sea.

We arrived in Portland at four in the afternoon, and unloaded at one of the forts. The first day, the mate, the cook, and I rolled out 300 barrels of cement to a place near the hatchway, where they could be hoisted from the hold to the wharf. Each of these barrels weighed 300 pounds. At night we were weary. In the morning, after stretching my tired muscles, I leaped out of my bunk, only to plunge head-first across the cabin against the further wall. Never was I more surprised. I seemed to have lost my center of equilibrium. The truth was that we had taken our cargo from one side only the day before, and during the night, as the tide went down, the vessel listed to the other side. Since the relative position of everything in the cabin was the same, I did not realize that the center of gravity had changed, until I tried to stand. From this experience, I rediscovered and confirmed Mr. Newton's conviction, and also found out that a shipmate lets you learn for yourself the hazards of a life at sea, expecting you to enjoy all the knocks that have buffeted him in the past.

As soon as the tide permitted, we ran over to Fort Preble, across the harbor, and unloaded 300 more barrels. In the late afternoon, we set sail for Fort Popham situated near the mouth of the Kennebec River. We did not arrive until 10 o'clock at night, and in trying to get a good anchorage we were caught in the tidal currents of the river. Before we knew what had happened, we had swung round, so that our stern was forced against the sharp rocks on the eastern side. The vessel might have been damaged, had it not been for our "life saver," the row-boat, that hung suspended from the davits in the stern. It acted as a buffer between the rocks and the vessel, and broke the shock of the collision. But sad to relate, it went to pieces in its good service.



I witnessed the crushing of my old friend with mingled joy and sorrow. It had kept us off the rocks at Hell Gate, at Storm King Mountain, and finally at Fort Popham.

In the morning we delivered the rest of our cargo at Fort Popham and started for Belfast. We were running light and sailed along easily, reaching port at 4 o'clock in the afternoon on Monday, September 18. We had been gone seven weeks in all. I returned completely cured of any inclination to follow the sea as a profession. On the other hand, I learned much that has been of value to me in my work. Among other things, I came to realize how easily and pleasantly man can slip into primitive ways of living and come to regard hardships with stoical indifference, even if the hardship amounts to actual privation.

## CHAPTER IV.

### A NORMAL INTERVAL OF LABOR AND ACTIVITY.

MY voyage on the good ship "Moses Eddy" made Belfast doubly attractive, and the prospect of the winter of 1864-1865 at school almost alluring. I had discovered at least what my profession was not to be. I would never aspire to the life of a sea-faring man. I think it is often by just a process of elimination that we find ourselves. There is no mention of my school until the middle of December, 1864, when I find recorded in my diary the opening of the winter term of the Select School which I had left to go to sea. Quite as a matter of course, the account of a fracas follows the opening of the winter term. "Had two new teachers. Could not do anything with the pupils. Did not behave very well. The school committee came in this afternoon to look us over." Such was the gentle but portentous beginning. On December 20 I recorded a continuation of hostilities. "Went to school in the morning. Had a gay time. Mayor Jewett and the committee came over in the afternoon and turned all the boys out of school." This was the end of the Select School for me. With a few other large boys I was transferred permanently to the High School, where I flourished under the supervision of men teachers. I fell to the lot of one Mr. Courtice, for whom I now feel much sympathy.

May I stop to sketch a bit of a portrait of myself? I was fifteen years old, 65 inches tall, and weighed about 150 pounds. Physically I was older than fifteen, but scholastically I did not measure up. Under the new teacher, however, I began to take an interest on my own account, strange to relate. For the first time, I came to appreciate the book

learning at which I had previously scoffed or rebelled. Moreover, my new rating put me with boys of my own age, and competition became keen. I tottered on the brink of a mental awakening, inevitable and unavoidable.

I continued to be a man of all work during my spare hours. My uncle, Axel Hayford, kept me supplied with work of a similar character to my first pick, shovel, and maul job. I showed no partiality in tools. I worked with a mowing scythe, rake, hoe, crow-bar, broad-axe, wood-saw, draw-shave, or sledge-hammer, indiscriminately and with equal ardor. The care of the fair grounds fell to my lot in the course of my work. I spent some time rebuilding the old board fence around the part which the heavy winds had blown down. Out of this carpentering job grew my position of race-track keeper. My uncle was greatly interested in horse-racing, and although I never became an enthusiast, I did learn how to lay out a track, and how to make a smooth durable surface. My lesson on the old trotting track came to my aid when I laid out a running track twenty years later at Harvard.

Similarly, the knowledge which I gained in the construction of the Hayford blocks, erected in 1865, helped me when I began to build gymnastic apparatus. Although I did only work of a crude type, I acquired a practical working knowledge of elementary constructional mechanics, and later I found too that I had not swung my little rope chair up in the rigging of the "Moses Eddy" for nothing. Moreover, I knew hoisting tackle fairly well after my tussles with the barrels of cement. I never trusted in Providence to make my tackle work, as I once saw a young Irishman, a verdant newcomer, do on a job on one of my uncle's buildings. We were working together one day, hoisting a keg of nails from the ground to the upper story. I fastened it to the tackle and fall with a rope sling, and called to the Irishman to hoist it to the third floor. When he pulled it up, I went for another keg, and was just rolling it into place, when the first keg descended precipitately from above. The man had hoisted

the load to the floor all right, but instead of holding the fall with one hand and pulling the keg to the floor with the other, he let go of the fall to pull the keg with both hands. The performance is, at first glance, so patently that of a very green immigrant, that it may seem an irrelevant episode. Yet we have students coming into the great universities who will turn up a weight in the gymnasium on a wrist roller, and stare in blank amazement when the weight falls to the floor as soon as they take their fingers from it. At least the Irishman is confessedly ignorant. We, of another generation that necessarily knew more manual labor in its youth, see the boy who has never made a fire, chopped a stick of wood, driven a nail, or actually worked as we did in our younger days, as green and unskilled as my Irishman. Our forefathers, by their hardships, were better schooled in physical education than are many of the tender products of our preparatory schools of today. Besides the evidence furnished by teachers in universities, many sad, significant, and important proofs of the ignorance of common mechanics were furnished by the officers of the World War. In many instances, stupidity or clumsiness in handling material, lack of commonsense, defective training in the great field of common labor caused huge losses of property, equipment, and in some cases, of human lives.

My uncle's interest in the race-track trained me for a new job. I became a fancy hostler. He had trotters, roadsters, and heavy truck horses. I drove them and rode them. I lacked authority in my horsemanship however, for although I was kind to them, they did not respond to my gentle treatment. I could never get the speed out of the trotters that even my sister did. They took advantage of me, and when I drove them, they did as they pleased. The trotter showed almost human fondness for me. I feel now that I almost deserved it. I slept near the stable where I could hear any noises among the horses. The stalls were narrow, perhaps  $3\frac{1}{2}$  feet wide. Night after night, the trotter became cast in her stall. This meant that she would roll over on her side,



so that she could not get her feet under her again to rise. Of course, as she struggled, she kicked the stall violently. The terrific noise was enough to awaken the entire neighborhood. It generally takes two or even three men to raise a horse in this predicament. The usual procedure is to draw the horse backward by its tail until its hind legs are free from the stall. Of course I did not have the strength to pull 1000 pounds of kicking horse out of the stall. But with the foolhardy courage of vigorous youth, I used to crawl into the stall with the madly-frightened animal, and after untying the halter, put my back and shoulders under the horse's shoulders, and support her until she could struggle to her forefeet. I should never recommend this stunt as a diversion, but it is a remedy for a bad situation if you have to tackle it alone. I derived a certain pleasure in relieving the poor horse and a decided satisfaction in realizing that I could perform the feat unattended. My nightmare in those days was a real mare with whom I actually struggled after many a rude awakening.

Nor did my uncle's live stock end with his horses. I learned a human lesson from his sheep. We are much alike, we humans and those sheep. The flock was quartered in an old lumber yard enclosed by odd buildings and strips of fence. My cousins and I had the pleasant task of driving the sheep from place to place, as they were sold. We made a sorry mess of it at first. In exasperation, we sometimes drove them into a stampede. Then one of us was sure to be swept off his feet, and either carried along on top of a bed of live wool, or ignominiously trampled as the flock rushed on. We soon realized that the extensive knowledge of everything in the world, that we thought we possessed, did not include sheep. After much difficulty and observation, we discovered that every flock could be divided into leaders, middlers, and tail enders. We marked the leaders with strings round their necks, and directed them. The flock followed. We had mastered sheep psychology.

This labor, which I have dwelt upon, was not entirely



carried on for the ensuing physical advantages. In the year 1865, I received \$126.92 for my services as carpenter, gardener, hostler, and shepherd. Furthermore, my cash accounts record an expenditure for that year of \$127.17. I cannot account for the quarter of a dollar.

To keep up my work and my school, my day was necessarily a long one. In the summer, I was up at 4, and in the winter, rarely later than 6 o'clock. But I was being educated or evolved and externalized, as my friend Professor Shaler would have said. And I enjoyed interspersing my school work with grown men's work. My outside manual work made my school work more like a diversion, and in January, 1865, I was tackling my studies with real enthusiasm and interest. I labored with arithmetic, philosophy which was more nearly like our modern physics than what we conceive as philosophy, geometry, and a book on anatomy, physiology, and hygiene by Dr. Calvin Cutter. I must have been well drilled in my geography; for I remember standing before a map, with the rest of my class, and naming the different countries of Europe with their capitals. The rhythm of the singsong recitation still sticks in my mind, and my present conception of the countries which I have never visited is based on the visual memory of that map, together with the recollection of our song. Russia is a big yellow patch in the upper right hand corner of Europe, with St. Petersburg and Moscow lettered plainly. Philosophy taught me about natural phenomena. I liked to learn the explanations of everyday things. And I enjoyed the logic of geometry. I felt that I had risen above the boring elementary studies, and had launched forth in a field of academic adventure.

The book that most interested and influenced me, however, was Dr. Cutter's "Anatomy, Physiology and Hygiene," first published in 1852. I have a copy of this book on my shelves today. Since the general subject of health is now receiving so much attention from our schools and colleges and also from our mercantile and industrial institutions, I am going to quote a few sentences from the preface of this old book, written

over sixty years ago. These words impressed me more deeply than any of my previous reading.

“Agesilaus, king of Sparta, when asked what things boys should learn, replied, ‘Those which they will practise when they become men.’ As health requires the observance of the laws inherent to the different organs of the human system, so, not only boys, but girls should acquire a knowledge of the laws of their organization. If sound morality depends upon the inculcation of correct principles in youth, equally so does a sound physical education during the same period of life.”

When I had read this book, labor and living assumed new meaning. My work, instead of being a grind, became an actual opportunity and pleasure. The physical benefit derived, rather than the pecuniary reward, assumed the prime importance. To develop myself grew to be an obsession with me. The thought that I could grow big and strong under my own tutelage came as a revelation. I had always felt the joy of existence and the thrill of life that comes from sound health, but I had never interpreted it and directed it. I became suddenly conscious of the physical potentiality for strength and health, which someone has been pleased to term “man’s supreme inheritance.” I renewed a neglected acquaintance with Indian clubs and dumb-bells, took up boxing with a greater interest than ever before, and systematized my heavy gymnastics.

About this time, different boys of the locality came back from boarding schools with stories of gymnastic achievements. Kent’s Hill, Farmington, and Topsham were the most popular with the Belfast boys, and I listened with bated breath to their tales of boxing bouts and of wonderful stunts. Curiously enough, I remember especially, as most remarkable, the stories told by the Topsham boys of the gymnastic exhibitions given by the students of Bowdoin College, which I was destined to enter later. These accounts stimulated physical culture among the Belfast school boys. We formed boxing and gymnastic clubs. One of these clubs met at

my uncle's barn, which I turned into a temporary gymnasium. There was enough rivalry to encourage boxing and the use of heavy apparatus. Many of us became quite expert.

My specialty was the horizontal bar. Owing to my varied work I had more strength and skill than most of the boys of my age, and I could do many stunts that balked the others. By the end of the year, I was doing giant swings both forward and back, and free back swings on the horizontal bar. Both of these are fairly good accomplishments for a fifteen year old boy.

But with all the gymnastics, I found plenty of time for school work. My diary records frequently that I rose at 5 o'clock to study geometry or philosophy, or whatever the subject for the day was. Early in the winter, there was keen competition in an oratorical line. Whether fistic or vocal, competitions seemed always to interest me. Public speaking, declaiming rather, was much in vogue just then. I suppose that we were inspired by the great orators of the day who were flinging their pleas north and south. The girls held to more conventional readings, but the boys wallowed in confessed declamations. And great was the "spouting!" We mouthed "Spartacus to the Gladiators" by Kellogg; "Bernardo del Carpio" by Mrs. Hemans; and "Resistance to British Aggression," which never failed to hold the stage and captivate the audience. At the closing school exhibition on March 10, by virtue of "Catiline's Defence," I was the proud winner of the prize. Having gained thereby some confidence in my own voice, I began to practise reading aloud and reciting dramatic selections. I was undeniably gravitating toward a histrionic career.

In the next month, April, came the news of the capture of Richmond, and the surrender of Lee's army. Then from the almost incessant ringing of bells, firing of cannon, and general exultation, the country plunged into universal gloom and black despair at the assassination of the President. Youth everywhere, as well as the more mature, felt the enormity of

the loss, the heart-ache of the grief. It was a strain on the emotions of a nation.

My next activity, I do not completely understand. I developed an ambition to become an expert marksman. Certainly the horrors of the war should have dimmed the lure of soldiery. But the target was set up in my uncle's lumber yard, and we practised devotedly, as we did everything, for a while. I had never done any shooting, and I have never done any since then. My enthusiasm was distinctly temporary. I record it as proof of the diversity of amusements and interests which youth embraces.

Still looking for my life work, I started again on my round of jobs when school closed. In the middle of the summer, someone suggested to me that I try for an appointment to West Point. Now West Point was still fresh in my memory from my rowing experience when I spent the night pulling at my dory with the cargo of barrel staves tied to the stern of my boat. My shoulders ached sympathetically at the recollection. But this test for West Point was different. I set about preparing for it. With six or seven other candidates, I took the examinations on September 25, 1865. Charles Palfrey, one of my fellow townsmen, was the successful competitor. He graduated from West Point with honors, but his health broke down a few years later. There was some satisfaction in knowing that I was second of the candidates, but my failure served me well in bringing home the fact that physical prowess does not entirely take the place of mental, and that I had failed to qualify because I was not up to the standard scholastically. Although I was disappointed at the time, I have never regretted my failure since I have grown up. Certain phases of army life appeal to me greatly, but I have probably been of as much service to my country doing the constructive work of making men physically fit to be soldiers as I would have done had I become an officer in the United States Army.

On Thursday, October 12, a great fire swept over Belfast, destroying some 125 buildings, laying waste 20 acres, turn-



ing hundreds of people out of their homes, and destroying about \$200,000 worth of property. The incendiary suspected was a vagrant, weak-willed youth about town, who habitually drank too much. The horrible destruction of the life-earnings of hard-working people impressed me deeply. Everything seemed to go before the blaze. A bit of breeze carried the sparks from one building to another, while we gazed, helpless until the fire had run its full course. It grew by what it fed on. Fighting it was hopeless and out of the question. Even the most thoughtless of us began to consider fire prevention, when faced with the calamity of this conflagration. We knew the preventives of the city, good fire apparatus, adequate water facilities, plenty of well-trained firemen, and fire-proof buildings; but how could a small town like ours protect itself? Situated on the side of a hill like so many river towns, a fire could sweep over it and consume it before the town folks could organize any defence. The fact that the fire was set made it doubly ominous. If we had to cope with human depravity as well as ill chance that could not be avoided, it was exceedingly discouraging. It became a question of moral responsibility in looking after the social welfare of the community. Every man should feel an individual and civic responsibility to help prevent vice, crime and disease, by raising the standards of the entire population and thereby lessening the number of criminals and victims of a low social order. Today we look to our schools to eliminate such depravity by education.



## CHAPTER V.

### 1866—I FIND MYSELF AS A GYMNAST.

UNTIL I broke into the acting profession, my life seems to have been conducted in preparation for anything that might present itself. Gradually I had come to look upon my gymnastic propensities as remunerative potentialities, but I did not know how to make any definite plans for their development. I was not sure that the public would care to view my stunts, but I was determined to perfect them so that I might dangle these feats tantalizingly before some manager. I fancy that the applause of my fellow townsmen who appreciated and overestimated my efforts, as friends always do, was responsible for my determination and jerky confidence.

I did not limit my preparations to physical activity; for although I spent several hours each day exercising my muscles, I spent quite as many developing my taste along different lines. My text books began to pall with their narrow didacticism, and I longed for a chance to strike out in the more attractive and, to me, unexplored field of literature. The school had no library; the Sunday School library was limited and very poor. I longed for more stimulating food than it afforded. With my limited funds, I could buy few books and consequently I began to record the bits from borrowed books which pleased me most. I bought a ledger, huge and bulky, 3 inches thick. Evidently I never expected to own a library of my own; for I prepared against a multitude of favorite passages. This "Commonplace Book," as I called it, is interesting to me today. Among the books which I thought worthy of preservation in my journal I find, "Extracts from Life Thoughts" by Beecher, "Conduct of Life" by Emerson, "Notes from Self Help" by Smiles, "The

Works of Rufus Choate" by Brown, "Letters of Chesterfield to his Son," "Physical Education" by Charles Caldwell, M.D., "Influence of Athletic Sports on Health" by Farquaharson, "Gymnastics," an article published in the Atlantic Monthly of March, 1861, by Thomas W. Higginson, "The Body and Mind" by George Moore, M.D., "Lay Sermons" by Thomas Huxley, "The Higher Education of Women" by Huxley. Could I have intended to become a scientist, an actor, a preacher, a lawyer, an educator, a business man, a humanitarian, or a citizen of the world? Certainly my reading showed no particular bent: to put it mildly I was impartial. My problem was to choose from these varied inclinations, and fasten upon a strain that would certainly earn my living. Air castles were well enough in my reading; but to shape a wage-earning existence, I had soon to become utilitarian.

During the winter, I find record of but little progress, rather a monotonous continuation of labor, school and play. Perhaps I should reverse the order of activities. The short winter days of northern New England gave me little time for my gymnastics. I had to resort in the evenings to a gymnasium that had been fitted up over one of the stores in town. With springtime and more daylight, I worked longer at my practical, wage-earning, uninteresting jobs. I found that I had difficulty in some of my gymnastic stunts. When I turned backward and forward somersaults, I did not attain sufficient elevation to turn quickly and land on my feet instead of my head. I took to practising this exercise on the side of a hill, where I experienced the benefit of the incline in taking off. At this time, I interpreted this difficulty as lack of power in my legs, which were not so extensively developed as my chest, arms, and shoulders. Boy-like, I imagined that through long hours of sitting still at my desk, I was undermining my strength in my legs. From frequent records in my diary of going to bed tired and of getting up in the morning lame and weary, it is now evident that I was overtrained. I had lost my nerve force. I tried to do too much. With the

carelessness of youth I overtaxed my energies, which I supposed inexhaustible. After a long period of school examinations, made more difficult by the additional preparation of a two-thousand word oration, I find that I went to bed several nights "pretty tired." Again, I record a tired feeling after a long evening of strenuous coasting, following a day of school work and gymnastic practice. I was "kind of lame" from hoisting brick and stone in the construction of one of my uncle's buildings, and strange to relate, I was exhausted after digging a drain through a rocky bed of a low-studded cellar! In addition to school and work, I was not giving up the dances and parties that the young people all attended, and I was often up until midnight without the luxury of a rest in bed the next morning. I had learned how to work and develop my muscles, but I had not learned how to conserve my energy. I did not realize that while I might rest some muscles and work others alternately I had only one heart and central nervous system that was working all the time.

However, I must have recognized this over-exertion eventually; for in the spring I gave up evening gymnastics, and made arrangements to be dismissed from school at 10.30 in the morning to attend to my gymnastics in the day-time. I continued at school in this way until I finished the course. The next year, in 1867, I also systematized my manual work, and reckoned it by the hour instead of by the job, except in March, April, July and August, when there was vacation from school, and I worked all day.

My work of this year, 1866, varied from sawing wood and pulling weeds, to carpentering and plumbing. Although I worked approximately eight hundred and fifty hours, my seasons earnings were only \$89.94. Today we have strikes and union wages and much less work.

About this time, my skill in gymnastics began to attract wider attention than that of approving school mates. My uncle brought strangers up to the barn to see me perform. A good number of boys, who were interested, practised with me, and the first thing we knew we had a very promising

troupe of athletes. So many people praised our attempts that we determined to give a public performance and reap a substantial emolument. On Saturday evening, February 16, 1867, we gave a public exhibition in a down-town hall. The report of the affair in the *Republican Journal* was most gratifying. Our show had an unexpected finish and snap; no one expected a crowd of boys to give a professional entertainment that would hold a large audience for two and a half hours. I was modestly heralded as a young Hercules, and a co-worker Mitchell, was described as a panther. All this was very pleasing. Our performance was pronounced to be as good as that of professional gymnasts. The article closed with a paragraph approving of the public interest in athletic exercise, and apprehensive that, in the pursuit of gain and the sharpening of intellect, such things would be forgotten. In conclusion it voiced the need of every country for a vigorous manhood to protect it in the time of crisis, and appealed to the people to create such vigor by physical exercise. We were so well pleased with ourselves as a result of our press notice, that we yearned to please more people and to inspire a larger public to rise and defend their country by developing a powerful manhood.

During the winter we gave several exhibitions and enlarged them with singing, dancing, instrumental music, and dramatic sketches. There was a remarkable amount of initiative and originality among the boys and girls at this time. We seemed to be able to swing almost any undertaking to which we set our minds and shoulders. I lay this progressive spirit largely to the influence of the principal of the High School, a Mr. Wiley, who considered his boys' and girls' social welfare as important as their Latin and Greek.

Aided by this diversity of talent, we organized a company, called "Sargent's Combination," and went to some of the neighboring towns and cities to exhibit. Our performance in Bangor on May 22 and 23 was reported in the *Bangor Times* with almost as much enthusiasm as was accorded us in the *Republican Journal*. However, the "Combination" came to



an abrupt ending after these performances, for the sad but simple reason that one of our not too carefully selected company stole our funds in the form of the manager's dressing room trunk. I had even to borrow money to get the troupe back to Belfast. The lot of a manager, I discovered at this early date, is precarious and often discouraging. I never tried to organize another company of my own. I had a \$300 debt to work off for printing material and gymnastic apparatus. My initial adventure was hardly a financial success.

In my public exhibitions, I came across a public prejudice which I was later to know well and battle hard. Some parents forbade their boys to take part in any kind of gymnastics which they regarded as "monkey shines" and "gymkinks." The gymnasium was regarded in the same light as were billiard saloons and bowling alleys. Whether this ill feeling was a survival of a Puritanical spirit that tended to stamp out all manifestations of life and joyousness, or whether its cause lay in the custom of the German turners of performing in cheap recreation halls and saloons, I cannot say. But I do know that many of the boys interested in gymnastics had to practise secretly in our barn. And the good church people, who objected to dancing and card playing, went further and said that no dramatic entertainment could be approved unless the proceeds went toward charity. On this basis, these social censors said that no gentleman could take part in dramatics or in any performance with an admission fee unless the coffers were turned directly over to the church. This standard of ethics has gone down with crinoline and hoops, forgotten by those whom it once regulated, and viewed as relics of the dark ages by the generation of today. Our problem, as poor boys with no rich man to endow us, was how to give such entertainments, charge no admission fee, and yet cover expenses. Such stern economic and social problems of early youth often shatter ideals and determine a course of action.

By my manual labor, I earned, as I have said, less than \$100 a season, and I found school work and gymnastics too



much for me. Consequently, in spite of the chance of social ostracism, I decided to concentrate upon the line of work I liked best and for which I seemed best fitted; I chose to become a professional gymnast.

Now I have already mentioned a boy named Hurley, who appeared with me in some of my stunts, and who had received a flattering mention in the press notice. Together we had become quite expert in tumbling acts and in doing acrobatic work in which I had to hold him in the air. I practised with him all the spring and we tried to perfect the tricks that we fancied we had invented. Then we looked for an engagement. Unfortunately most professional engagements are made in the late fall and early winter. Our chances seemed poor. But as luck was apparently with us, a travelling circus came to town in the early summer. Immediately we offered our services. The manager gave me the chance to take part in the horizontal bar exercises given by the famous Goldie Brothers. The bar was placed so high that in the general excitement of my first professional appearance I did not gauge my weight right, and as a result, I overturned on some of my somersets and fly-aways. The reversible Giant's Swing, which was new in those days, was one of my specialties for which I was commended. The enthusiastic audience of my own town launched me on my career as circus performer with an overwhelming reception. I had found myself for the time being.

## CHAPTER VI.

### I BECOME A MEMBER OF A PROFESSIONAL CIRCUS COMPANY AND TRAVEL WITH THE SHOW.

I APPROACHED my first engagement with characteristically boyish ardor and indiscrimination. Most circuses engaged their entire company in the autumn, and as a result, young Hurley and I, looking for places in the spring, jumped at the first chance that we saw. Of course we knew nothing of the days and ways of travelling shows, and all shows seemed equally glowing with potential gleams of success. Never was profession more enchantingly beautiful than that of the tumbling acrobats who coyly beckoned from swinging bars and trapezes in front of the dazzling footlights. All was glamour and glory. With noble aspirations and quiet confidence, we answered this impelling call, when we went to St. Albans, Vermont, on July 13, 1867, to join a variety show. The unique character of this company was that it went from town to town, giving its entertainment twice a day in canvas tents, which were carried about in vans and teams, and set up at each stop, just as circuses do today. The performance consisted of the usual acrobatic stunts, singing minstrels, dancing, bits of melodrama to lend a dramatic tone, ventriloquism, and magic bunnies drawn from dilapidated silk hats.

The gymnastic part of the performance was contributed by young men and boys who had picked up their art from watching professional performers in other shows, much as I had done, and had practised until they had something similar to offer. My stage work consisted of a turn on the horizontal bar with two or three other performers, and an acrobatic act with Hurley. In all, my professional work occupied fifteen or twenty minutes of each performance, but I had

to stay at the tent throughout both performances, in case that I was needed. During these four or five hours loafing about the tent, I used to attend to my not too extensive wardrobe. We were in the habit of making our own cloth slippers and our trunks. One day I undertook a bit of laundry work and hung my tights out to dry behind the tent. There must have been poison ivy in the vicinity; for the next day, I was a sight to behold. Liberal applications of sugar of lead put me right again, however, and I was able to go on with my regular work.

Occasionally I filled in as supernumerary in dramatic sketches; there was no end to my usefulness. At the close of each afternoon performance I spent half an hour or so practising my stunts, so that I should not become "rusty." The work was the same as that which I had been doing for a good while in my barn at Belfast. I made little actual progress; instead I simply commercialized what I had already accomplished. The great difference, however, was the constant change of scene. We moved on nearly every day. If the town had any spots of interest historically, we tried to see them, provided that we could hold our heads up after our trip; for we generally left one town anywhere from 2.00 to 5.00 in the morning in order to make the next one in time to set up the show. In view of the fact that the rides were frequently most uncomfortable, and our conveyances were among the worst, we frequently found our beds the most attractive sights that we could gaze upon in a new town. We awoke in time for dinner and the performance. After a week or two the monotony of circus life began to pall upon me and I looked about for more to do. My experience in my uncle's contracting work led me to volunteer as an extra canvas man. At least, I would thus have more to do. Moreover, it changed my mode of travelling, since I had to start earlier than the performers. Riding on the top of a wagon loaded with seats was much more comfortable than sitting up in the so-called carriages of the performers. I could lie and meditate, whereas formerly, I had sat and bumped.

But 3.00 o'clock is a bit early for comfortable rising, and many laughable things happened in those wee small hours when few of us were wholly conscious. Everywhere that we went we seemed to have a reputation to sustain. And sustain it, most of the men did. Voracity was the word among circus men, and our company was no exception to the rule. Table manners bothered no one; if a clean plate was not forthcoming for a second course, the first course plate was turned upside down, and used again. A knife was the only manly implement for table use. At one hotel, they regretted that they could not give us napkins; for the last show had eaten them. One morning I was serenely preparing to devour a huge plate of buckwheat cakes that I had ordered especially. I had buttered them, poured syrup on them, and was just about to start the inquest, when a tall canvas man reached across the table and speared the pile of cakes on his fork. As a tenderfoot, I made no remonstrances, but when I spoke of the episode to my fellow performers later, they were exceedingly angry. I learned then that there was a kind of caste among showmen, which forbade canvas men and performers to mingle. They told me that I had better decide to be either a performer or a canvas man; for I could not fill both positions in the same company. I had subjected the whole profession to an insult. In the future I was to limit my associations to the performers. Trivial as this incident may seem, I was, curiously enough, to hear of it again later.

We travelled on in our company through the northern part of New York State, playing daily to increasingly poorer audiences. When the first of the month and pay-day came, there was no money in the treasury to pay our salaries. Many left immediately for New York City and other engagements. With the boy, Hurley, I took the train on August 5 for Ogdensburg, where I had learned that Stone & Murray's circus, in which I had played as an extra at Belfast early in the season, was billed to appear on August 14. The "rub" was that I had no money to pay for my board in the interval before the circus came to Ogdensburg. Something had to



be done. We decided to leave our trunks at the hotel, and pick them up again if we were fortunate enough to return with the circus. Then we started out for Ellensburg, where the Stone & Murray show was to arrive on August 7. I sold a gold watch, which my father had left me, for \$12.00, but I made an agreement to the effect that I could redeem it on August 14 for the same amount. We travelled on the \$12.00. The only train that stopped at Ellensburg was a semi-freight way train. It dropped us at our destination at 2.00 o'clock in the morning, and a bleaker, blacker morning, I do not remember. There was not even an agent at the desolate little station. In the inky darkness we could find no sign of life until we discovered a dim light over the brow of a hill. We climbed the embankment to see if we could get lodgings but we could not rouse anyone at the house, except a vociferous dog, who made us change our minds about trying to get in. We returned to the station, rolled up our small bundle of ring togs, for a pillow, and retired for the rest of the night on the back platform of the station. At 4.00 o'clock, we woke to find that the town was about 2 miles away. We started for town directly, in order to get our breakfasts and to be sure to meet the circus when it arrived.

I think that the figure of Mr. Murray, riding into town that morning was one of the gladdest sights I ever beheld. He recognized me as the young man who had appeared with his company at Belfast. After he heard my story he decided to hire Hurley and me for the rest of the season. I barely refrained from falling on his neck. He arranged for us to do horizontal bar work with the Goldie Brothers, and to take part in the tumbling and acrobatic work of the rest of the company.

The Goldie Brothers, with whom I was associated, certainly deserve a word or two. Like most performers, they were brothers only in the business, but they were two of the finest men I ever knew. George, the older, a Scot, was a picture-frame maker by trade; Henry, the second had been a New

York school teacher; and Claude, the youngest, was a New York school boy. They had learned their gymnastics in John Wood's Twenty-eighth Street Gymnasium in New York, which was, for a long time, the great rendezvous of professional gymnasts, as well as of men who were fond of all-round athletic exercise. The Goldies were well trained men, of high principles and of intelligence, men with whom it was a privilege to work.

Moreover, like my co-workers, Mr. John H. Murray and Mr. Eaton Stone, the proprietors, were both men of high character and integrity. Every aspect of their circus was refined and business-like. The contrast between these gentlemen and my erstwhile travelling companions convinced me of my good fortune in changing. My new employers were thoughtful and considerate of their men. Today the daily conveyance of men and horses from town to town is recognized as a factor of prime importance. Modern circus employers now send their performers by Pullmans and special trains in as great ease as they possibly can. Stone & Murray had this same idea. We had no great luxuries in the sixties, but our mode of travel was comparatively comfortable. Some eight or ten of us always journeyed in an old omnibus that had formerly been used as a hospital ambulance. It had been rejuvenated with a unique combination of springs that made riding over rough roads very easy. But our early starts and long trips every morning continued to be the bane of my circus career. Sometimes the drivers lost the road, and we had an extra hour of misery. Bed was the destination of all the performers. Not so the manager, however. This circus had four men at the head, and it was systematized so nicely that each one had his own province, upon which no one else encroached. One took charge of the grounds and canvas as soon as we arrived in town; another looked after the horses and animals; a third was concerned with the profession; and the fourth was the financial man, the treasurer, who looked after our hotel accommodations and our salaries. The rest of the

force was organized under these leaders. Because I had a boy under my wing, I used to go to bed pretty early, and it became a habit of the treasurer's to put the strong box, containing all the money under my bed. In consequence of this bit of watch-dog duty, my room was invariably well placed, near the treasurer's. I did not fare at all badly.

In this company, the discipline in the dressing rooms was most strict. Three of the proprietors were performers in the ring, and they enforced their rules rigidly. The costume trunk was placed in a definite spot, and everyone had his rights which everyone else was forced to respect. A canvas partition separated the men' and women's dressing-room, and every word that was spoken could be heard throughout the tent. As a consequence, the character of the language was strictly censored, and I do not remember ever having heard any profanity. Frequently, heated political and religious arguments would ensue, but no one ever offended by repeating vulgar stories, or by indulging in the kind of cheap talk that is popularly supposed to be the proper conversation for behind the scenes. Toward the end of September, as the nights became cooler, an air-tight wood stove took off the chill and dampness of the outdoor dressing room.

The organization behind the production fascinated and interested me. I need not go into any description of the performance in the ring, so well known is it to everyone, but I will say that the dispatch and regularity of all our work impressed me greatly. Everything we did, from dressing and going into the ring to rising and eating our breakfasts, was done as regularly as we breathed.

But in spite of the admirable surroundings, the monotony of circus life began to pall again, and I suppose that it was in such a frame of mind that I asked to be excused one afternoon to ride over to the Smith Show in which I had started my season. They were performing in a nearby town, and another performer, who had also been a victim of their short funds, went over with me to see if we could collect some of our long overdue salary. The reader will probably not be

surprised to learn that our attempts were not altogether successful, and that we said a good many things which would have been better left unsaid. Just as we were leaving a man stepped up on our carriage and hit me on the head with a rock. I was knocked out of my seat and carried up to the hotel unconscious. I regained consciousness shortly, but after the physician had sewn up the cut and dressed the wound, I was obliged to remain in the hotel overnight. In the morning I left and joined my show at the town to which it had gone during the night. It turned out that my assailant was the boss canvas man who had pilfered my buckwheat cakes that morning at the hotel.

When I returned to the show, everyone treated me with great kindness and consideration. Mr. Murray excused me for several days, and, as I lay in my bed, I was glad of the monotonous routine which I had found so dull; by the music, I could tell exactly what was going on, and I knew who was receiving the applause, and what was coming next. I saw the performance as graphically as if I had been among the spectators in the tent.

On my return to the show, I annexed another responsibility which pleased me considerably. I rode in the grand entry. My horse caused me some apprehension when I thought of guiding the animal through the difficult maze of dance figures, and the idea of making him lie down at the end appalled me. However, I discovered almost immediately that the horse would train me, that I was an unnecessary appendage to his entrance, merely an ornament, so to speak. Not belittling myself, or my abilities as a horseman, I realized that anyone in costume would have done quite as well as I, so perfectly did the horse understand his part. No stunts were expected of me; and I thoroughly enjoyed the spectacular entrance.

In performing in the old-fashioned circus rings, the greatest dangers came from the rough uneven surfaces of the ground, which is proper only for the animal acts. It is gratifying to



see today that most of the acrobatic work is given on temporary wooden stages. The pits and stones and little hummocks, thinly covered with sawdust, are responsible for most of the strained wrists, sprained ankles, and permanently weakened knees that have crippled many circus performers. Even in those days, before nets were commonly used for mid-air acts, there were surprisingly few serious accidents. Occasionally, as in any profession, faulty apparatus, improperly arranged, caused unexpected calamities, but I know of no profession that is studied and prearranged so carefully in the interest of safety and security. You are an unsuccessful performer if your audience has not perfect confidence in your stability, and to give this confidence, you must have it yourself.

And speaking of audiences, I must say that they afford as interesting a study of humanity as you could find anywhere. Each one has a distinct individuality of its own, apathetic, or enthusiastic. Every performer tries to win applause for his act. In gymnastics, we used to win applause and approbation in college or school towns, where the audience was familiar with the work of the gymnasium, and understood and appreciated the fine technic. In small rural towns, the minstrels, clowns, and side-show freaks were the darlings of the public. As soon as a performer senses his audience, he adapts himself. He may loaf before an unappreciative crowd, or exert himself to the utmost before people who show interest and enthusiasm.

There are rough and there are quiet audiences; some are tough and some are refined. In mill towns, the managers always looked for a rowdy element, and frequently their anticipations were rewarded with a free-for-all fight. Such an unmanageable crowd has often been known to rush the ticket office, and to force an entrance. These mix-ups sometimes became quite furious, usually ending in ugly accidents unless order was restored immediately. A well-managed circus is organized against such dangers, but a tactful man-

ager will avoid any conflict, because public opinion will always be with the crowd, no matter how much at fault they may have been.

With this Stone & Murray show, I travelled through parts of New York, New Jersey, and Connecticut, and ended the season on October 31 at Bridgeport, Connecticut. When we were performing in Brooklyn, I enjoyed a distinct thrill of satisfaction in being able to invite several of my old Belfast friends to see Hurley and myself exhibit, in the "big city," some of the stunts we had learned in the old barn at my uncle's. So ended my first engagement.

## CHAPTER VII.

### IN PREPARATION FOR BIGGER PUBLICS.

AT the close of the circus season, when the winter weather made tents untenable and uncomfortable, and folks put by their circus ardor until the next spring and went to the theatres instead, I left the Goldie Brothers and my first professional engagement. Young Hurley, the boy whom I had brought with me from Belfast, remained with the company and went to Cincinnati to go on the real stage. I was by no means satisfied with the stunts that I could offer as my profession; the little that I had seen and heard of the gymnastic profession convinced me that I ought to enlarge my repertoire and try to invent some specialties that would be new in this old game. For inspiration, I went to Boston. At the old Tremont Gymnasium I met the Hanlon Brothers, who were, at that time, the stars of the acrobatic world. After talking with them and with young professionals who had been on the road during the tenting season—the prosperous summer months were thus designated—I was even more determined to perfect my gymnastics so that I might hold a decent position in these brilliant ranks. Talk of the feats which the professionals showed amazed and discouraged me; but the accompanying tales of salaries spurred me on to great effort. Rumor had it that one man, named Aric, who did a balancing act on a swinging trapeze, and another man, one Avola, who performed on the horizontal bars, each drew a weekly stipend of \$500.00. Five hundred dollars was an awe inspiring sum in itself, but coming every seven days, it was well nigh unbelievable. My hard labors in Belfast had not netted me so much as that yearly. If my gymnastics could open such vistas to me, they were indeed worthy of being called

a profession. I returned to Belfast, determined to master some of the tricks about which I had heard, and I was already evolving some new material of my own.

My return was not heralded with brass bands or flowers. To be exactly truthful, I did not stand in favor with all the townfolk. It was one thing to win their applause at my early exhibitions in the town, and another to win their approval after a year in the circus. A vicious report was circulated that "now that Dud Sargent had come home, every boy in town would soon have his heels in the air." Fond mothers carefully guarded their offspring, lest they be spirited away by the dread "monkey shines," even as the Hurley boy had been. When that same Hurley boy returned a month or two later, much improved in appearance, dressed in good clothes, and grown into a fine young man, the gossips shook their heads, and boded no good from his physical prowess. How anything as attractive as he could have come from a circus, they could not understand. They suspected that the magician in the show had had a hand in the transformation. It must have been legerdemain. All the consciously godly and righteous citizens of Belfast were prejudiced against me and my adopted calling. Curiously enough, however, my real encouragement came from the most select classes. Some of the doctors, lawyers, ministers, and educators seemed to understand and visualize what I was trying to do, and fortunately I was enthusiastic enough about my work to persist in spite of false social standards. I had made my decision, and I was going to test it thoroughly before rejecting it. It is, as I look back upon it, one of the most interesting features of the preparation for my life work. My life at Belfast, thereafter, was systematic training for a professional career. Any other work that I did was a means to an end. I bought new apparatus, I gave up all diversions that encroached upon the sacred grounds of my training. I gave up school altogether and laid out a course of reading to be done outside. However, since my work for my uncle made apparatus and living possible, that went on. All the



rest of my time I spent planning and constructing new appliances, and devising and practising new stunts as fast as the ideas evolved.

Of course, in this intensive work, I lost many of my former companions who looked upon this gymnastic work as a pleasant physical diversion; for they had neither the time nor the inclination to work as hard as I was working, and as I had to work if I hoped to accomplish any results worth counting. Nor had I the time to spend training them in the elementary work which I had already perfected, and with which I had formerly held their interest. In the absence of these boys, partly because of loneliness, but more because of the need that I felt for a co-worker in the feats which I was trying to work out, I began to look round for a partner. I understood why most professional acrobats worked in teams. The combinations of "Brothers" that are so common among acrobats, are in reality not relatives, but merely men working better together in preference to doing so alone. When a man gets into the more difficult stages of the profession, it is practically impossible physically for him to hold the stage for the required length of time. Moreover, a greater variety of entertainment can be worked up if two men are performing.

Now I could find no professional companion ready to join me, unless I went to one of the large cities, to Boston, New York, or to Chicago, and such a journey was, for the time being, out of the question. Consequently, it was incumbent upon me to make another professional right there in Belfast. I began to invent contrivances to build up strength, so that the boys would be physically strong enough to undertake difficult gymnastics. Most of the unusual feats require a good deal of strength as well as skill. First I encouraged the boys who were practising with me by means of pulley weights. If a boy was not strong enough to lift his own weight in a required manner, he could work up to it by lifting a lighter weight over a pulley time after time, until he was sufficiently developed to lift his own. Thus I developed manhood. Nor could I ask the boys to take the chances involved in learning

the more difficult trapeze and balancing acts. Few people stop to think how professionals master their difficult feats; some may even sympathize with the falls which they imagine that they get before they reach perfection. The more thoughtful, however, must realize that they do not endanger life and limb so carelessly. I made use of the simple method, which many had used before me, of adjusting the apparatus a few inches from the floor so that the student could safely master the muscular control necessary for greater heights. A feat as difficult as the Giant's Swing became simple when it was practised lying on one's back on a mattress and rolling backward to a hand stand by grasping a horizontal bar supported just a few inches from the floor. The knack of shifting the wrist to catch one's weight and balance on top of this low bar, is the same twist required to carry one in the same position at arm's length over the bar when it is placed at a greater height. By such devices, I managed to hold a small following in Belfast, and unwittingly I was getting excellent training for the teaching that I was to undertake soon after at Bowdoin College.

Early in 1868, I began working on two horizontal bars, placed about 8 feet apart. I invented and tried all manner of stunts on this apparatus. A good deal of the time was necessarily devoted to experiment and adjustment, but finally I worked out a series that seemed to me creditable, if I could perfect it. Between my periods of hard struggle, as a relief from blistered hands, bruised shins, and chafed hamstrings, I undertook to do a bit on the balancing trapeze, because that was work that involved more patience than strength. The trapeze is an iron bar,  $1\frac{1}{2}$  inches in diameter, and about 3 feet long, suspended by two ropes, each about 10 feet in length. My aspiration was to balance so perfectly that I could not only stand in various positions, and kneel as well, but that I could sit in a rocking chair, with only the tips of the rockers on the bar. The ropes at the sides were only for safety and suspension, never to be touched. Of course the bar, in the actual performance, is swung up in the

air from 10 to 50 feet, but I swung my trapeze some 18 inches from the floor, so that I had practically no distance to fall when I toppled over. And when the bar swung wildly back and forth above me, it was high enough so that I could lie flat on the floor without being hit. My ambition was aroused by stories of other performances, but when I started my attempts I felt absolutely certain that these things could never be done, because they seemed contrary to Mr. Newton's law. Like the college professor who had declared that a baseball pitcher could not pitch in curves, I felt that these balancing stunts were impossible. Yet I knew that some other men had done them, and in themselves they fascinated me. If men had done them, I could, and I was determined. The little former experience that I had had was limited to fence rails, and occasionally to slack wire, but in both these instances, there were only two movements to counteract, the tendency to fall to the right or to the left. But in the new trapeze, there were at least six such movements, separately and sometimes collectively complicated by a rotary movement. Its very contrariness made me fight.

The boys who were working with me did not realize any keen enjoyment in watching me try to do what I, to them, evidently could not do, and they became impatient. They wished to show their friends and relatives what they had already mastered. Moreover, the financial aspect of apparatus had become important and difficult. As a result of these various considerations, we decided to give an exhibition. We worked up features on the horizontal and parallel bars, on the double trapeze, on a suspended horizontal ladder, on rings, and on ropes. At the beginning, we gave two performances, which proved so successful financially that we were able to increase our assortment of apparatus. These acts were repeated during the winter at various entertainments, and the boys coöperated with the girls' dramatic society in putting on occasional plays. Our gymnastics were accepted as a regular entertainment.

By the spring, I began to make some progress in my more

ambitious stunts. But even these did not satisfy me when I reached a degree of proficiency: I was determined to go further, and to invent something spectacular of my own. I worked out a somewhat imaginative performance on paper. The scheme was to get a trapeze bar swinging until the ropes reached an angle of 50 or 60 degrees, and then to change from an upright position to a hanging grip with my hands and arms. Then when I had reached the limit of my swing, I planned to turn a somersault in mid-air from the trapeze and to catch a rope suspended about 20 or 30 feet away. Now I could not get my height and swinging space in any of the barns, nor could I rig up the apparatus safely for practice. But youth is ingenious, and I rigged up my apparatus on one of the wharves where I could try my trick first over water. On one of the first warm days in May, I sallied forth to my trapeze with a favorable wind behind, and a favorable tide below. I made the turning leap for the rope at the end of as big a swing as I could work up. I caught hold of the rope, but came at so great a speed and from such a height, that I could not retain my hold. Hence I fell into the water. The day, as I said, was a warm one, but not so the water. Although the fall did not hurt me at all, the icy bath cooled my ardor for that day. Each time I tried the stunt, it was with similar results. Finally after much figuring, I decided to swing the rope farther away, and to draw the end under me so that it would hang at an angle of 45 degrees when caught. The problem was solved. The swinging of the rope, when I caught it, broke the shock of the fall, and I descended on it easily. My stunt was accomplished.

Toward the end of May, I made an agreement with a traveling theatrical company, then in Belfast, to do a horizontal bar performance between the acts. But just before this engagement materialized, I received an offer to go to one of the large cities for a four weeks engagement to do a bar and trapeze act, at a much larger salary. I received this offer through a friend whom I had met the previous year in



the circus, and with whom I was to act. Of course we travelled under assumed names. Our four weeks lengthened into three months, and we played in vaudeville theatres in some of the larger cities. The experience was on a scale that I had not before attempted. Because I had not finished my work on the double bars before leaving Belfast, I confined myself on this occasion to the single horizontal bar, and to the balancing trapeze. The bar performance was not unusual, and was difficult only as far as the summer heat made it almost impossible to keep the hands dry enough to hold the apparatus firmly. There was also some discomfort in landing; for we had no mattresses to protect ourselves or the floor.

My trapeze work proved more sensational. I did it in the air over the heads of the orchestra, or sometimes even over the audience. I climbed to the trapeze on a rope, hand over hand, for some 30 or 40 feet. The worst part of it was the stuffy air up in the loft of the theatres. It was bad enough down below, in July and August, but up at the top it was stifling. I balanced on my hands and knees, stood on a ladder, sat in an ordinary chair, and as a grand finale, balanced with the tips of the rockers of a rocking chair resting on the swinging bar. I usually came back to earth by turning a somersault to a rope arranged over the stage. On one occasion, however, the rope was suspended from the center of the auditorium and swung between the chairs of the middle aisle. I used that arrangement once only; for the strain was too great for the spectators. Even when I came down over the orchestra, the players seemed very much frightened. Such a performance should be prohibited in the interest of good music. In those days nets for their protection or for mine were unheard of. Their predicament, to be sure, never occurred to me, because, I was too absorbed in the work at hand to notice apprehensive spectators or nervous musicians. They might have died of fright, and I would have played on, artistically oblivious. If some of our most violent "rooters" realized how little of their vocal

activity reaches their favorites, many an enthusiast would save his voice for the morrow.

I do remember the anxious faces that looked up at me sometimes, consigning me to an early grave through my recklessness. Yet it was that element that made them come to see me. Today I wonder how many of them are still alive, and I mourn over the great number of young aviators who might have saved their lives if they had had a little more muscular and nerve control at the critical moment. A little training, such as I had, would have made them better fitted to ascend to great heights. Skilled as I was by constant practice, the danger of my work was reduced to almost nothing. And I almost believe that its precautions made it safe, when I stop to consider that my father and two of my uncles lost their lives by accidents that came to them in the dull, monotonous work of ship carpenters.

Of course the matter of immorality is one constantly connected with stage people by all the dear, old gossips of a village. In Belfast I was consigned to certain purgatory by many respectable citizens. But judging from my brief and transitory experience, I would say that the standards of living among circus folk averaged better than those of the majority of young men in ordinary life. To keep their jobs acrobats must keep fit. It is a sort of religion with them. The man who tries to burn the candle at both ends inevitably goes under. Most of them realize this necessity for clean living. The popular conception that the life of a gymnast is a short one is false. Dickens and Charles Reade have done much to give this impression to people. To be sure, gymnasts cannot continue in the profession indefinitely, for younger men take their places; but they generally live to the same ages as other citizens engaged in less exciting walks of life. The dangers in acrobatics lie more in accidents that cripple than in those that kill, rather in accidents that impair the strength than in those that ruin it.

The uncertainty of continuous work was the "fly" in the otherwise pleasant "ointment" of gymnastic work. Never-

theless, I invested \$300.00 in a big net and in some other equipment, and decided to chance the financial uncertainty. With my partner I went to Springfield to rest up for a week or two between shows. While there I made an engagement to meet the manager of a New York company which was to take men to South America and great adventure. From Springfield I went to Hartford to visit some friends, and from there I was to have gone direct to New York by boat. But at the mouth of the Connecticut River, the boat on which I was travelling was grounded on a sand bar and delayed for two hours, so I missed my appointment in New York, and my trip to South America. In fact, my whole life became diverted to another course. Who says there is not a destiny that shapes our lives?

## CHAPTER VIII.

### I PUT MY PROFESSION TO A NEW USE.

IN the autumn of 1868, when I was still eighteen years old, I returned to Belfast. The disappointment of losing my trip to South America did not overwhelm me, for I had already begun to consider a new use for my professional gymnastics. I had wearied of the circus, not because the applause and approbation of the crowds and the satisfaction of achievement had palled, but because the attendant life of the circus made me uneasy and discontented. The tawdry trappings, the inevitable company of loafers, the artificiality of show life became repugnant to me. Moreover, the everlasting journeying stirred up a sort of disturbing restlessness, a pointless and purposeless wanderlust. I realized that this discontent was non-productive, and that it did not make for my happiness. The public, rapacious for novelty, will not brook any repetition; so the ambitious artist must be constantly moving to new publics that have never seen his work. Then, too, I tired of having people look upon me as a cross between a monkey and a gypsy, an interpretation of circus life which the performers must endure, even encourage, since the very strangeness of such a popular conception whets the curiosity of our precious audiences. If by bad luck, the latter discover that the players are mere men just as they are, they immediately lose their interest in such banality. Such is the much talked of conceit of the average man. And when he loses interest, the circus loses the gate receipts. Consequently the showman must constantly strive to be something which he is not; he must act always from fear that someone looking on may see that he is just an ordinary mortal. Discovery means financial ruin.



Now I had not practised hour after hour in the barn, and I had not left school and spent all my earnings on apparatus for the purpose of becoming one of these helpless automatons. At first, I worked for the sheer love of activity; then, later, to transform the energy of play and superabundant vitality into some form of achievement. This achievement in my case developed into gymnastics. I became an ardent follower of my art for its own sake. But I could not continue indefinitely enjoying my prowess for the sake of the enjoyment; I had to turn it to some financial use. Although for a while, by going into the circus business, I did sacrifice my love of sport as an amateur, and to some extent did lay aside my self respect, I did not for a moment look upon the phase as permanent, nor did I ever fancy that my life calling was that of a circus performer.

Upon my return to Belfast, I began to consider my gymnastics as an opening for an ambition which I had always felt, but which I did not hope to realize immediately. I determined to head for a college education. Because no opportunity arose for me to make use of my acrobatics, I went to work again for my uncle. He was just starting a new block of buildings, and I became a general utility man. I worked in the office one day, took account of a cargo of lumber the next, and in short, did everything I could to be of service. Incidentally, I had a debt to clear, incurred by the purchase of gymnastic apparatus. My spare time I devoted to systematic practice of all-round gymnastics, tumbling and acrobatics, similar to my training of the year before. I hoped in some way to turn this skill toward my new goal, a college education.

With this hope of a college education, came the desire for a career in one of the so-called learned professions. I was quite at a loss to decide which one I should follow, since my opportunities were equally poor in all. A book entitled "Conversations with Rufus Choate," the author of which I cannot recall, interested me in the possibilities of the law. A young Dartmouth graduate, named Bicknell, who was

studying law in Belfast, encouraged me in this direction. Forensic oratory had for a long time fascinated me, and I had followed the court proceedings as a matter of interest for several years. My uncle encouraged this bent, and urged me to turn my reading to such purpose. I talked with several lawyers on the matter of entering a law office, but my efforts to establish myself were not exceedingly fruitful.

The next profession toward which I gravitated, was the ministry. With my natural taste for oratory, I had read books of sermons by Henry Ward Beecher, by Orville Dewey, by E. H. Chapin, and many others whose names I cannot remember today. These divine orations interested me so much that they actually influenced my style of speaking and writing. I have often been aware of a certain diffusiveness in my speech which was not strictly in keeping with the profession which I finally chose.

Now I went to church regularly, not because I was strictly religious, but because I was fond of church music and good preaching. My upbringing and family traditions placed my possible salvation in the hands of the Universalists, since both my mother's and my uncle's family attended that church. My grandmother on my mother's side, however, was a strict Congregationalist. The Universalist minister in town befriended me and had encouraged me in my clerical ambitions. I grew into the habit of going to the parsonage, borrowing his books, and afterward discussing them with him. He approved of my plan of studying for the ministry at some institution where I could make my gymnastics contributory to my preliminary education. He promised to recommend me for the position of gymnastic director at Westbrook Seminary, where I could prepare for Tufts and the Universalist ministry. Immediately I began to modify and simplify my work to meet the requirements of a preparatory school youth and the preparatory school curriculum. But my gymnastics, upon which I was depending, were the cause of my downfall from Universalist grace.

In order to finish one of my uncle's buildings by the day

scheduled for its dedication, it had been necessary for the workmen to stay late into the night. "One Saturday night it fell to my lot to work not only until midnight, but for a time after. In the morning, I went to church, according to my usual custom. Our pew was in the last row of the block of side pews that ran at right angles with the main section. Our seats were in full view of the entire church. A long line of stove funnel ran down each side of the church from the stoves in the front to the chimney in the back. These pipes were suspended from the ceiling by vertical iron rods and hung about 8 feet from the floor. On that fateful Sunday, I was sitting just in front of an open window. The balmy atmosphere of the day permeated my entire being. The bees outside and the minister inside droned pleasantly in chorus. Since engaging in my strenuous work for my uncle I had enjoyed only a few hours sleep. Softly and quietly I slipped off into a gentle doze. But as my head fell back, my eyes opened for an instant, and I looked up at one of the supporting iron rods. My reaction was instantaneous. I jumped forward and upward to grasp the rod. My awakening was rude and complete. I tried to recover myself, and in the effort nearly fell backward through the window. It was, of course, the automatic action of the muscles, which I had trained to protect myself in mid-air gymnastics, that made me jump for the bar on this most inopportune occasion. My performance created a disturbance which was never to be forgiven. Since then, I have never jumped at the heating apparatus in church, but I have often made myself conspicuous by a quick muscular reaction which has been distinctly out of place. When a rocking chair has tilted over the edge of a thick rug, even though not poised upon a bar in mid-air, my contortions have often caused terror or amusement to the uninitiated.

Our minister in Belfast showed little enthusiasm for my auto-defensive work. It was bad enough to think that I, poor weak mortal aspiring to the ministry, had fallen asleep during the sermon, a horrible example, but it was doubly

unpropitious that I should have fallen into the ways of a circus performer as naturally as I breathed. The fact that I was weary from my late work did not seem to enter into the matter at all. On the following week I was overwhelmed by having a sermon preached for my benefit, a funeral sermon for my ministerial aspirations. As far as that particular minister was concerned, I was impossible. My qualifications in his mind pointed to the stage rather than to the pulpit. Billy Sunday and De Witt Talmadge had not appeared. The text of my sermon was from Acts XX: 9. "And there sat in a window a certain young man named Entychus, being fallen into a deep sleep; and as Paul was long preaching, he sunk down with sleep, and fell down from the third loft, and was taken up dead." To the preacher, I was dead; he may consequently be excused for the inaccuracy. If he had gone to the tenth verse in the same chapter, he would have found a more accurate description of my condition. "And Paul went down, and fell on him, and embracing him said, 'Trouble not yourselves; for his life is in him.'"

With the ministry banned, I sought another profession. Several doctors in Belfast, Dr. Lewis in Pendleton, his brother Dr. Edward, and a friend, Dr. Flanders, took a kindly interest in my ambitions and education. They recommended books for me to read and headed me toward the medical profession. Darwin's "Origin of Species," Huxley's "Lay Sermons," and the philosophical works of Herbert Spencer took the place of church literature. A new world was opened to me. Already familiar with elementary physiology, this science of living became a fascinating interpretation of life, opening new windows and displaying new vistas to dream of and to explore.

In June one of my friends, Fred Monroe, returned from Brunswick and his first year at Bowdoin college, with the report of a possible vacancy in the gymnasium. I saw the promised new worlds opening to my touch if I could get this position.

I began to collect letters of recommendation from everyone



who I thought would be willing to say a good word for me. Among these letters, the one that proved the most useful was from Rev. Worcester Parker, the Congregational minister in Belfast. His son Edwin had married the daughter of Rev. Samuel Harris, the president of Bowdoin College. Moreover, in July, when President Harris and his wife visited Dr. Parker's family in Belfast, I was invited to call and meet the President. As a result of the interview, I received the appointment of Director of Gymnastics at Bowdoin for the next year. My work started with the opening of the fall term in September, and the princely reward for my labors amounted to just \$5.00 a week. In the face of the present conception of wages, I delight in telling this story to aspiring physical instructors, who consider themselves misunderstood and unappreciated if they do not receive salaries ranging anywhere from \$20.00 to \$100.00 a week, according to their experience in the work and their conceit in their persons.

President Harris was satisfied with my ability to teach gymnastics, but he was a little skeptical about my ability as a boxing teacher. The man who had held the position before me had prided himself in his boxing, and had interested the students in it. President Harris knew the opposition that I should have to encounter at Bowdoin, and he felt that a knowledge of boxing was almost imperative if I was to hold the respect and interest of my pupils. Later his expectations and prophecies were fulfilled. I had done a bit of boxing with the boys in the barn, enough to become adept in a rough and tumble sort of way; but of the so-called "science of self-defense," I knew nothing. Consequently I set out for Boston and instruction. Tom Denny, a character in boxing circles, but an excellent teacher, kept a barroom on one of the streets near the waterfront. He was a saloon keeper, boxer, and politician. In a vacant room behind his bar, where politicians were trained physically, and psychologically convinced of their functions as governors of the community, I learned the art and science of the gloves. Denny

made a specialty of countering, which he maintained was the surest way of making your opponent defeat himself. He used this theory when we started boxing together, after I had had about two weeks of lessons, and by his science he easily overcame my advantage of youth and strength. The training that he gave me was exactly what I needed for my teaching.

I tried to find a teacher of wrestling, but since no one could tell me of anyone, I had to rely upon the intuitive knowledge which I had acquired while I trained my muscles for acrobatic work. One of my favorite pastimes in the old barn was to lie on the floor and let two or three other boys try to hold me down. Consequently my knowledge of wrestling was a conviction in the rough. Although I had plenty of time while I was in Boston to take up fencing, I did not do so; for there was no call for it in my contract, and it did not attract me as a sport.

In August I returned to Belfast to complete my preparations for my work. The college opened on September 28—my twentieth birthday. I trained and planned against my campaign of the fall. Even then when I did not have the perspective of years, I realized that my previous and varied occupations, totally insignificant in themselves, had played an important contributory part to my new and serious profession.

## CHAPTER IX.

### MY FIRST YEAR AT BOWDOIN COLLEGE.

IN the Fall of 1869 I found my ambition realized; I was installed as physical director of Bowdoin College. I was enthusiastic and firm in my convictions, but I knew that my only way to success lay in pleasing the faculty, and convincing them that their new director was in full accord with their views and ideas of physical education. President Harris had a very definite policy, temperate and thoughtful, which I set about to follow as carefully as I could. His views, that I was to try to express in my work, are best set forth in his inaugural address, a part of which follows.

“First, physical culture must not be neglected. But here, observe, that it does not belong to the college to train the senses to the special uses and the hand to the special dexterity necessary in special pursuits. Such training belongs to professional schools, to schools of the arts and to apprenticeship to trades. Nor does it belong to the college to train men to the highest development of muscle, of agility, or of speed; for such training belongs only to the professional athlete and acrobat. This is an extraordinary training of special powers, incompatible with the full orbed and harmonious development of the man, and unfavorable to the greatest health and longevity, and to the best intellectual advancement. No people ever gave more prominence to physical culture than the Greeks; yet Plato insists that the training of an athlete must not be permitted in the education of the young. He says that the athletes are intellectually sluggish, men who doze away their lives and are of dubious and unreliable health. He therefore insists that the gymnastic training of the young should be more simple

and moderate, and recommends military drill. Physical culture must be kept in subordination to intellectual culture. If it absorbs the interest and energy that should be devoted to study, it frustrates its own design and makes the whole college nugatory. There should be that kind and degree of physical culture which is essential to vigorous health, so as to insure the greatest serenity of spirit, capacity for work, and power of endurance, in order to dispel despondency and gloom, exhaling like mists from the man's own disordered liver, so that he may not break down under the first strain accompanying the severe exigencies of life, and so that it may be every day a joy to live and work. Other things being equal, the healthy man is the happiest and makes others the happier. He is the more pleasant husband and father, the more generous friend, the cheerer and helper of the sad, in every position and relation, the wholesome man. He radiates joy. Health, as the perpetual spring of animation and energy, is the first requisite of success. It must never be out of sight in the administration of a college."

These ideals of the place and function of physical culture in an institution of learning, as Dr. Harris set them forth, impressed me deeply. I determined to put them to the practical test. My equipment, however, was so inadequate that its very presence was a hindrance rather than a help. There was a sort of gymnasium, a field of a couple of acres located back of the present medical school, and a boat-house large enough for three or four boats. This boat-house was a good mile and a half from the college buildings. Around the outside of the campus was a well-worn path that could be used as a running course by a single person, but not wide enough to allow two people to run side by side. Unfortunately Brunswick has virtually seven months of winter, so the grounds and river are not available for more than two or three months of the college year.

Consequently, the gymnasium for indoor practice was a very important factor. The gymnasium that had to serve my purpose was a little low-studded, ramshackle building,



formerly a dining-hall, about 60 feet long and 25 feet wide. The main and upper room housed the apparatus, such as it was. The floor space was quite inadequate for anything but the most constrained exercise. Downstairs in the basement we had a bowling alley, and two heavy pulley-weight machines. The dressing-room, a little shed 10 by 20 feet, built on at one end of the gymnasium, contained about 40 lockers, 1 foot square. The bath room boasted a pump, a wooden sink 6 feet long, and 6 tin wash basins. There were no other conveniences. Every man was entitled to a dip in the tin basin. The upper room, which I passed over so lightly, and which was the largest room in the building, contained everything else in the department of physical education. So low was it that all the hanging apparatus, all of which consisted of a double trapeze, a pair of rings, and a climbing rope, were hung from the ridge pole, between the cross beams that tied the outer walls together. On the west side of the room, there were 6 pulley-weight rowing machines; on the side wall, opposite, a single wrist roller; and at the front end of the room, near the door, a few pulley-weight machines that were fixed in a box frame with 6 inches of sawdust on the bottom. There was also a set of parallel bars, and a vaulting bar that could be used as a horizontal bar. A few pairs of Indian clubs, some heavy iron dumb-bells, and one or two gymnasium mattresses completed the equipment. With such equipment it was my task to command the interest and attention of the 130 men then in college. I recognized the problem. Without spirit and support I could not hope to call my gymnastic work successful.

For the sake of economy, I had undertaken to do my own janitor work. To keep the establishment going after it was once started was not so difficult, but at the beginning I had a long and arduous task ahead of me in the way of reconstruction. I had a good friend in the late Honorable Marcellus Coggan of Boston, who helped me mend and innovate. His experience as a sailor had made him more competent than my cruise up the Hudson had made me, and he proved

invaluable in rigging up my rope apparatus. I reduced the weight of the Indian clubs by turning them down, and I reduced the effective weight of the pulley machines by half, by the use of an additional pulley attached to the top of the weight and a double length of rope. In such ways I tried to make what little equipment I had more practical and applicable for the average man. It is amusing to note that this simple device which I employed on the pulley machine saved me from a lawsuit twelve or fifteen years afterward at Harvard; for by priority of introduction, I was able to ignore certain claims for patent rights, upon which in my apparatus I had apparently, but quite innocently, infringed.

The apparatus which I found at Bowdoin was of the type used in most of the New England colleges, copied from the models in the Harvard Gymnasium which had been introduced from Germany by Professor Follen and Professor Beck about 1825. All this equipment is of the heavy-weight class, and is far too strenuous for the untrained, inexperienced man. Unless a man has the strength to lift his own weight easily by his arms, exercise on this apparatus is laborious and unpleasant. In many instances, it is a form of torture.

There are always, in every college, however, a certain number of young men who have climbed about from the time they were boys, and are delighted to learn to do the work on swings, rings, and bars, if they receive any instruction or encouragement. It was through such apparatus that I made my appeal, rather than through the more arduous exercise. I knew that the college had given very creditable exhibitions in previous years and that I had only to rouse the enthusiasm of the students to make my work popular and, to some degree, successful. In fact, the reports of the Bowdoin exhibitions, which my friends had brought to me in Belfast, had been one of my earliest inspirations to make myself proficient in gymnastics. Now I was trying to instruct these students. Moreover, one of the requirements of my position as Director of the Gymnasium was to

arrange such an exhibition by the end of December, both to interest the students, and to show the faculty what progress I was making.

With the aid of a few graduates and more than a few upper classmen, I organized my classes, and started teaching and practising with them. I brought my own apparatus with me, but before I could set it up, I had to make arrangements to have the floor at one end of the gymnasium dropped 4 feet, so that there would be sufficient height for my work. The college carpenters made this adjustment for me, and as soon as I had my double bars, rings, and trapeze in place, the boys took a new hold, and we began to work in earnest for the exhibition.

Now it happened that my predecessor had been a past master in boxing, and of course he had worked up a following in this sport. So to many of the boys, whose summers were spent with the fishermen and lumbermen of Maine, boxing seemed far more important than high-class gymnastics. They believed in the practical value of the fists. As a result of this feeling, and quite without my knowledge, they arranged to test my proficiency as a scrapper. They had a champion in the oldest son of my predecessor, a young man who had assisted in the instruction the previous year. One morning, when I was putting the gymnasium in order, a young man about my size walked in, and said that he would like to put the gloves on with me. I did not know who he was, but I was perfectly willing to accommodate him, particularly when he taunted me a bit by saying that he never knew a gymnast who could box. I was green enough to be entirely fearless, and as a result we had quite a lively set to. Finally, by a stroke of good luck, I landed on his face with a straight counter from my left. Just as he sat down, I heard a loud rapping on the front door. When I got to the door, I found it locked, and before I could open it, the boys had gone round to the dressing room, where they found my opponent wiping the blood off his face. It seems there had been a wager to the effect that he was to knock me out in a certain length of

time, but why he locked the door I do not know. At any rate, the little affair gave me more prestige among the boys than a whole year of hard work would have done. I was able to uphold the old traditions of the college, in the opinion of that critical group of judges, the undergraduate body. It was only necessary then to try me out as a wrestler. I managed to pass muster in this field, and thereupon became established for ever and aye.

Today it is hard to understand entirely what a very important part the ability to use one's fists played in the ordinary work-a-day life of the late sixties. Self-defense is always regarded as a manly attribute, but in those days it was a question of success or failure in many cases. Many lads, after their four years at college, went out to work in the mills and lumber camps where muscular strength was an essential to handle the rough class of laborers. With science and skill added to brute strength, the young man with the education could command any situation. Brains without brawn, and brawn well directed and trained, have each sometimes proved to be quite futile. But there is one story of a young man who used his physical prowess to good stead in school teaching. Many rural school committees used to find it very difficult to get men who could preserve discipline in the district schools, where the pupils, grown young men in many instances, knew no law, and took keener delight in nothing than in running a teacher out of town. They were not bad in themselves, but they were boys who had to snatch a bit of education in between the working seasons, and were too independent to take anything like the voluntary order of a school-room seriously. One of these schools, a notoriously difficult one, called a young man named Turner to take charge. At college he had won a reputation as a boxer, and he was soon to make use of his ability in this line as well as his knowledge of the three R's. His school was in one of the coast towns of Maine, where the population is made up chiefly of sailors, fishermen, and farmers, who were finishing their elementary education at their leisure. The first morn-



ing he opened school with a prayer. Divine supplication was well under way when a quid of tobacco struck him squarely in the face. He immediately rose, and walked toward the back row of seats. Two young men rose to meet him. As quick as a flask, he knocked one of them down with his right fist and simultaneously he laid the other one out with his left. Then he turned, and walked quietly back to his desk and finished the prayer. He had no more disciplinary trouble during the entire term. He had established law and order once for all.

With the support of the students, I progressed rapidly in the preparation for my exhibition after I had proved myself in boxing and wrestling. They entered into the work with the most gratifying enthusiasm. I had one strong prejudice to overcome, however, in the general predilection for heavy gymnastics. I was eager to introduce some light apparatus, but they fancied that to use wooden clubs and dumb-bells was an admission of weakness. But since I could demonstrate to them with the heavy apparatus, and do things with it that they could not, they listened to me, and a few Portland boys, who had had some training with the lighter equipment, even volunteered to drill some squads for the exhibition. They went about and found men who were not doing any other work for it, and formed them into a group to demonstrate the use of wooden clubs. As a result, when the time for exhibiting came, we had a well-balanced program, consisting of exercises in light and heavy gymnastics, work on the bars, rings, and trapeze, a dumb-bell drill, an Indian club drill, and one or two other numbers which I do not recall. The President and Faculty attended our performance, and received our efforts most enthusiastically. And not only did they come to praise; for my salary was raised from \$5.00 a week to \$500.00 a year without a word of solicitation from me. Moreover, I was given an appropriation for apparatus and a janitor for the building.

So I launched out upon my fifty years fight for the recognition and promotion of physical education in the schools

and colleges of America. As soon as my work in the gymnasium was running smoothly, I began to prepare to enter the college myself. First I tutored with various men, but later I entered the college preparatory class at the Brunswick High School. After all, no matter how pleasant my new position was, I could not forget that it was the means by which I was to try to climb higher toward a learned profession.

## CHAPTER X.

### THE PROGRESS OF GYMNASTICS AT BOWDOIN.

IN launching any new course in the curriculum of a college, one has to consider the attitude of those who take no part in the actual work, but whose opinion carries weight among the people, as well as that of the supporters who advocate its cause with sympathy and fervor. Hence, in the introduction of gymnastics at Bowdoin, we had to pay heed to the reactions of the non-athletic student, the Faculty, the Governing Board, and finally of the great unclassified throng of interested spectators. Nearly everyone, erudite or not, feels that criticism of educational institutions is his God-given right. At Bowdoin we might feel outraged by such indiscriminate opinion, but we were forced to listen in spite of ourselves.

What did the public expect? What did our critics look for in a gymnasium? How did we decide upon a standard? A word in regard to the popular gymnastic concepts of 1870 may not be amiss at this point. The educational temperature of the State of Maine regulated itself almost entirely by the fevers or chills of Boston and New York, those great collecting and distributing news centers of the East. What New York and Boston decreed was law. And their absolute jurisdiction extended to all branches of education. Their theories on physical education were as definite as their theories on the more intellectual side of the program.

In Boston, Dr. Winship had established heavy-weight lifting as a satisfactory means of all round development. His convictions came from his own amusing training that began with his lifting a calf. He continued to lift and gain strength

as the calf gained weight, until one day he was lifting a full grown ox. His feat, widely advertised, became proof of the efficacy of lifting weights. William B. Curtis, at one time called "The Father of Athletics in America," made a record by lifting 1323 pounds with a hand grip, and 3239 pounds when the harness was attached to his body. Like mushrooms after rain, lifting machines sprang up in parlors and offices and schools everywhere. The exercises for young and old were proclaimed widely. The converts hurled their slogan, "A maximum of exercise in a minimum of time," into the faces of all comers. They persuaded busy people, merchants, students, and professional men.

The reaction to this heavy-weight lifting system came in the introduction of new gymnastics by Dr. Dio Lewis. He substituted wooden for iron dumb-bells, used light Indian clubs, wooden wands, and bean-bags for his exercises. At first the public looked upon such exercise as fitting play for young ladies' seminaries; but little by little its worth was recognized, and the system was adopted in schools and colleges for boys. For example, the required gymnastics at Amherst were built up round the varied use of wooden dumb-bells.

Military drill was another form of exercise which had received impetus from the shocking unpreparedness of the Civil War, unpreparedness not so much military as physical. Furthermore Congress encouraged this undertaking by furnishing officers to give military instruction where it was required.

Finally, in addition to the heavy-weight lifting, the light dumb-bell work and military training, Dr. Follen and Dr. Beck had introduced a class of gymnastics which had been made famous by Jahn in Germany. In 1870, this work had developed into a series of high-class stunts performed by experts on various kinds of apparatus. George Goldie, whom I have already mentioned as a professional acrobat, was teaching this work as Director of the Gymnasium at Princeton College. John Doldt was demonstrating it at the



Tremont Street Gymnasium in Boston, and I hoped to introduce it at Bowdoin.

Little attention was given to wrestling; this sport was left to farmers at country fairs. We did find occasional interest in boxing fostered by athletic clubs and social organizations. And there was some spirited boxing at the colleges, the application of which I have already mentioned.

With all these various methods, and in the face of ardent partisanship, I had to make my choice at Bowdoin in 1870. Since I had found interest in heavy gymnastics and boxing established by my predecessor, and considerable proficiency developed among the upper-class men, I decided to extend the work along the same lines, and gradually introduce my own ideas; for I realized the wisdom of cherishing what was already there. Proficiency in gymnastics is not acquired in a few weeks. The existing talent made our first exhibition a possibility. I have told how I tried to increase the students' interest. Finally my endeavors were rewarded by a press notice in the "College Bulletin." "The gymnasium, under the charge of its new Director, a man of whom the college may justly be proud, has been repaired, and that the students enter into the enthusiasm of Mr. Sargent is evident from the unusual number that may be seen there every morning and noon. *We only wish it might become one of the regular college exercises.*"

I had been waiting for just such an expression of feeling, and recognized my opportunity to act. More equipment was indispensable for larger classes, and I saw a chance to introduce my own theories in the form of new apparatus. Consequently, I ordered two dozen pairs of Indian clubs and wooden dumb-bells, so that I might start work immediately with larger classes. The Indian clubs caused an amusing disturbance. They arrived with an escort, the sheriff. Mistaking my gymnasium paraphernalia for bludgeons, he came to arrest me for encouraging the strife that already existed between the town boys and the students. He fancied that I was arming the "gowns" for the annihila-

tion of the "towns." To him, Indian clubs meant the large heavy variety used by my predecessor, and the only use that he could imagine for my apparatus was to clout and vanquish some hostile mob.

My first problem in the enlargement of my gymnastic classes was to persuade the small, unathletic men to take an interest. Up to this time only the strong and vigorous were able to compete in the exercises, and the very men who needed their strength developed by exercise came but to watch the prowess of their more robust friends, and to take their gymnastics by proxy. Such a situation was of course basically wrong. With the new light equipment, I intended to attract every one, robust and delicate. The non-athletic men were, as usual, in the majority. In the colleges of those days, men who had mental ability, but who were physically weak, were in greater proportion than they are today. But these men, who were taking the academic side of college with profound seriousness, looked for all the edicts to come from the Faculty. Any precepts for physical preparedness must come from the same source if it was to carry weight with them. I began my fifty years' fight for the establishment of gymnastics as part of the college curriculum.

In the catalogue of 1869-1870, my name appeared at the end of the Faculty, with a heavy black line above it, to fence off the sheep. My title, "Director of the Gymnasium," was added to prevent all ambiguity. My predecessor, you must remember, had been a teacher of boxing, and I was his successor. Still the authorities had insisted that I qualify as boxing instructor before I could be accepted in the capacity of Gymnasium Director. My ambition, moreover, was not to turn out professional boxers or gymnasts, but to fit the men for their after-life quite as the academic routine prepared them, and in the meantime, to increase their efficiency as students, as we increased their physical endowments.

In the next issue of the catalogue, the instructors were ranked according to their ages. I was no longer herded off by myself. The department was accorded one short para-

graph. "The Gymnasium is provided with the usual gymnastic apparatus, and furnishes good facilities for physical culture under the instruction of the Director."

Further recognition of a more definite variety was necessary. In the fall of 1871, I obtained it. In addition to the stereotyped announcement there was another paragraph. "The exercises in this department are at present optional, but at the beginning of the first term, the vital statistics of every student will be taken by the Director, and a course of instruction will be prescribed according to the physical condition of each man; thus giving to every member of the college an opportunity to receive the salutary benefits of intelligent and systemic physical training." I had driven the entering wedge. In 1872, a new schedule appeared with the announcement: "Attendance at the gymnasium to a certain extent is now required. Both the voluntary and the regular exercises are under the immediate supervision of the Director, and in neither will any random, violent, or injurious practice be allowed. The class drill is a systematic course, while special exercises will be prescribed for individual cases; the whole being based upon physiological and hygienic principles."

And then followed the schedule.

1872-1873.

REQUIRED DAILY, SATURDAY AND SUNDAY EXCEPTED.

Seniors	11 to 11.30 A.M.	Select	4.30 to 5 P.M.
Juniors	11.30 to 12 A.M.	I Proficients	12.00 to 1 P.M.
Sophomores	5 to 5.30 P.M.	II Proficients	1.00 to 2 P.M.
Freshmen	5.30 to 6 P.M.		

PROFICIENTS EXEMPT FROM CLASS DRILL.

Bowdoin, I believe, was among the first of the American colleges to require attendance at the gymnasium five days a week for everyone, and to grade the work not only by classes but according to individual ability.

In 1872, another innovation came, which resulted almost disastrously for all gymnastic drills. Bowdoin had advanced too rapidly for public opinion. In 1871, General Joshua L. Chamberlain became President of Bowdoin. An enthusiast for military training, he opened a department of military science and tactics, and made this training a part of the regular curriculum. Bowdoin's experience in the matter of compulsory military training might be of interest to any college of today that contemplates similar steps. The catalogue of 1872 read: "In accordance with the laws of the United States, and by direction of the President, an officer of the Army has been detailed to give instruction in the College. The Board have accepted and authorized this department of instruction, and placed it on an equal footing with any other in respect to authority and discipline. The students will be required to attend such exercises as may be prescribed by the Faculty, unless excused by reason of physical disability or religious scruple. The instruction will be conveniently dispersed through the course, and will embrace personal, squad, company, and battalion drill; the tactics of the three Arms; guard and outpost duty; principles of strategy; engineering, ordnance, and gunnery; military history, law, and regulations.

"During the season favorable to exercise in the open air, there will be a daily drill of one hour, closing with a dress parade at sunset. At other times, there will be occasional exercises within doors, for the purpose of illustrating topics of instruction and keeping up the spirit of the department."

Added to this military program, there was an explanation in the same catalogue of the supplementary part to be played by the gymnasium. "It is the intention, in order to secure proper and sufficient physical exercise, to alternate between the Gymnasium and the Military. At present, the requirements are the gymnastic drill from the beginning or latter part of October to the end of the second term (about April 8-10) and the military drill from the beginning of the summer term to the middle or the latter part of October. Both an



orchestral and a military band have recently been organized, which will add much interest to these exercises and to various public occasions."

An avalanche of criticism met these military and gymnastic requirements. As a consequence, Bowdoin had to retract in her rather strenuous program. Enthusiasm frequently leads to early exaggeration, and the new course was a detriment to the college. In 1873, the requirements were modified.

"In order to promote a symmetrical and manly education, much attention is now given to Physical Culture. The exercises are based upon physiological and hygienic principles, and are directed not with a view to making professional experts, but to making the development of the bodily powers coincidental with the disciplining of the mind. It should be understood that nothing like what is termed 'military duty' is attempted or intended in the college. The exercises required make but the lightest demand on the time or strength. The main object aimed at is to make use, as far as we may, of those exercises which are expressly adapted to develop strength of body, dignity of bearing, courtesy of manners, and a spirit of obedience, self-possession, and honor, in short, to enable the student to make the most of himself as a man."

Again in 1874 and 1875, my last two years at Bowdoin, the President and Faculty modified the physical requirements in response to the sharp criticism of outsiders. They adopted an almost apologetic attitude in connection with military science, and the gymnasium officer of the army was announced as giving instruction to those who desired it in the three arms of the service, and in the minor operations of war, with an outline of general military science. "It is not proposed to invade, in any degree, the regular college course by these studies, but to profit by the provision of the Government under which this instruction is afforded as a branch of the public service. The physical exercises of this department have long been regarded as peculiarly adapted to bring out

manly strength and dignity, and to promote habits of obedience and self command and a spirit of courtesy and honor."

And the catalogue of 1874 continues in an explanatory method: "In order to secure proper attention to physical culture, a gymnasium has been put into successful operation. . . . The exercises constitute a systematic course based upon physiological and hygienic principles, and are under the immediate supervision of the Director, who will strictly prohibit any violent or injurious practice. The salutary effects of this exercise will be perceived not only in the general tone of health and strength among the students, but in the correction of physical defects and weaknesses, and even of incipient disease in individual cases. Each student, not for sufficient reasons excused by the Faculty, will be required to elect between the gymnastic and military exercises."

The significant and outstanding feature of these announcements is that the preceptors, sensitive to outside criticism, had softened their aggressive attitude, but they had, at the same time, left a definite gymnastic requirement. They might separate me from the Faculty as an undesirable member but I had won my point. Every student, non-athletic or athletic, had to exercise in some way, and develop his physical capacity as well as his mental. We established ourselves without doubt at Bowdoin, and we aimed definitely to develop our physical education without rousing the enmity of that public, that was always watching for a chance to condemn anything new. I will at this point enumerate some of the endeavors of the gymnasium at Bowdoin. I can think of no better way than to number them as so many separate objectives.

1. To meet the varied needs of all classes of students.
2. To allay the fears of anxious parents against the dangers of accidents in the gymnasium.
3. To gratify the pride of some parents in the improved bearing and personal appearance of their sons at college.
4. To meet the objections of the school men as to the

amount of time devoted to purely physical work, as they called it.

5. To meet the objections of the "grinds" who were jealous of anything that took them from their strictly scholastic pursuits.

6. To cause the exercises of the gymnasium to be looked upon as play and a form of amusement and diversion from the more serious work of the college.

7. To serve as a means of bringing about a more hygienic method of living and to build up and strengthen the body as well as to fortify it against disease.

Can anyone argue that these aspirations did not aim at serious and helpful physical preparedness for every student in the college? The President and Faculty strove to perfect a natural, pleasant course of physical education that would make their graduates better men. To have been with them during this transitional period was an excellent and interesting experience. What progress I made, and what concessions were made to me, were more gratifying than I can tell. It was like the working out of a dream, not entirely complete in the fulfilment perhaps, according to the standards of today, but almost a miracle at that time. Bowdoin marks the first period of my work, a period of youthful aspiration and partial success, enough at any rate to spur me on in my work, and to whet my ambition. And each day, as I planned the next, new problems arose to baffle and perplex me.

## CHAPTER XI.

### GYMNASTICS AT MEMORIAL HALL.

FROM the beginning of my work at Bowdoin, the Faculty, with great understanding and infinite tact, led the horse, step by step, to water; it was up to me to make him drink. With the present attitude toward athletics, this task seems easy enough. In 1870, however, college athletics were unheard of; popular sentiment decreed that gymnastics were well enough for those who had time to waste. The attendance at the gymnasium during my first year exceeded all my expectations, and the exhibition which we held in March of that year showed remarkable results. The men who made this work seem so successful, and who constantly attended the classes at the gymnasium, were those interested in heavy apparatus work. They accomplished difficult feats, and might have ranked well among skilled professional gymnasts. Now this work showed off to excellent advantage, but it did not make for the greatest good of the college. The men who most needed exercise did not take part at all. Consequently the gymnasium was spending its energy developing the physiques of those students who were least in need of it, and missing the very men for whose well being it was intended.

We could not arouse a general love of competition with inter-class and intercollegiate contests; for such games did not exist. Football was an excuse for a scrimmage between freshmen and sophomores several times each fall. The baseball and crew, for want of organization, attracted a deplorably small group of men. There was no feeling of obligation to do something in athletics for the college. Those men who played on the few teams that did exist, or rowed on the crews, did whatever they did for the love of the sport, and not



many men were enthusiastic enough to follow these sketchy athletics systematically when there was no systematic organization. Athletics were in a scrub condition.

The under-classmen worked off some of their surplus energy in occasional tugs-of-war, but since they practised no more for these events than they did for their football games, the results were generally rough and tumble affairs ending in a "free-for-all." The game, peculiar to Bowdoin, called "Hold In," gave another opportunity for a friendly fight. After a college meeting, that called forth most of the two lower classes, a few sturdy sophomores would make a rush for the door, form a barricade round it, and shout "Hold In! Hold In!" Thereupon the freshmen rushed madly to force their way through, the sophomores inside the room held them back as best they could, and the scrimmage was on, until the barricade gave way, or the upper-classmen declared the freshmen "Held In!"

Occasionally a boxing match would be arranged more or less secretly for the amusement of a small group. Here again, it was the sport-loving students who arranged these events, and the athletic value bore a doubtful relation to the pugnacious inspiration. All these games, if games they may be called, took on the nature of hazing and inter-class rushes, rather than beneficial athletics. They stirred up bad blood rather than wholesome rivalry.

Besides the need for organized games, Bowdoin suffered from a lack of facilities for natural outdoor sports. The skating and coasting were poor, and the seasons for swimming were so short during the college year that they were almost negligible. As a result, for six months of the year, the boys were driven to the gymnasium by sheer necessity, if they wanted exercise, or physical training. My heavy apparatus experts never failed me. But the men who came to watch them, and the many more who did not bother to come at all, both lacked the power to perform as did my skilful enthusiasts. These were the very men that needed gymnastic work, and whom I was trying to reach. They could not do

even the simpler exercises on the heavy apparatus, and it was my task to bring them up to such a point. Naturally, unsuccessful attempts would not mean large classes of beginners. Some new preparatory apparatus was necessary.

A man's strength, suppleness, power and control of his muscles all mark his limitation or ability to do acrobatic work. They all depend upon degrees of perfection, effected by hard practice. The sheer rugged strength of the boys who came from farms, mills, and lumber camps meant little without grace and suppleness; on the other hand, grace had to be backed with vigor and muscular power. Well-controlled strength stands as the keynote to most successful athletic work. A man must be able to support his weight on bars, ropes, rings, and ladders, before he can master any difficult gymnastic feats. My work obviously was to develop the latent strength of those men who had so far done no gymnastic work. Consequently I rejuvenated my old apparatus of the barn at Belfast, and set about improving and improvising. The gratifying results seemed magical. Under this necessity, I inaugurated my developing appliances, which most gymnasiums now use. My classes doubled and trebled, the journals heaped praise on our heads for the exhibitions of our prowess which we gave in Bath and Portland later in the year. I came to regard myself as something of a magician who was drawing full-fledged athletes out of the hat with a mere twist of the hand.

Now that the fear of inferiority had been successfully overcome, and example after example had proved that anyone with the desire could become proficient in the gymnasium, I set about to increase the desiring element of the student body. The voluntary attendance swelled steadily, but as long as any group remained that I did not reach, I was not satisfied. With the ardor of my conviction that I was offering to the youth of Bowdoin a vital commodity, my fingers itched to get hold of those who would not heed the friendly lure of the love of sport.

The Faculty saw my point readily enough, that I was

missing perhaps the most important group in college, and in 1872, with the inauguration of President Joshua L. Chamberlain, I obtained my coveted compulsory attendance. But an unmixed joy is not a human possibility; perhaps it is a divine potentiality, but divinities are uncommon in everyday life. The compelling, fluttering fly in my ointment was my quarters. To give my greatly enlarged classes graded work, so that I could hold the attention and interest of the expert, and not discourage the beginners, required greater floor space and apparatus than I had at the time. After much argument and dispute, the authorities gave me the large unfinished lower floor of Memorial Hall. This arrangement gave me three times as much floor space as I had had previously, and enough height for all my suspended apparatus. Moreover, in the new quarters, the fresh air fiends were satisfied. In fact the coals of fire which we heaped upon their heads were the only form of heating with which we were favored. The floor space recommended the room to us, but here the charm stopped. Rough, giant blocks formed the walls, and cloth screens served for windows. The professor of engineering said that to heat this room would be to heat a pasture with the bars down, and that the only adequate plan would be to warm up the campus first. And the winter months in Brunswick are chilly!

In the Fall of 1872, when we inaugurated compulsory gymnasium attendance, I started my career as an undergraduate. The combination of our new building and the idea of a freshman director did not answer too well for success in the gymnasium. The way was anything but smooth. Moreover, I had the army to reckon with. Happily it turned out that the military organization which took the place of the gymnasium work in early fall and late spring, worked in with my plans and facilitated my administration. The military commander had drawn up his staff of officers before the work in the gymnasium began, and he wished to preserve his *esprit de corps* during the winter when there was no drill. He had selected his lieutenants and captains and

majors with great care. We talked over together with the President most of the appointments; for I was well acquainted with the men and could tell him which ones had ability to lead and which were the followers. I had learned that lesson many years before from the flock of sheep in Belfast. I cared little what titles my coaches and assistants had, provided they were good gymnasts and leaders.

And assistants were necessary in view of my varied program. The Freshmen started with free exercises or setting up drill and dumb-bells; the Sophomores with free exercises and Indian clubs; the Juniors added chest-weights to the setting up drill; and the Seniors worked with wooden wands and high pulleys. Men in need of any special corrective work formed additional classes, and, on the other hand, it was finally arranged for two voluntary classes of proficient to practice for an hour every day, being exempt from the class drills. The regular class work lasted a half hour every day except Saturdays and Sundays. My assistants directed the class drills and the newly-organized athletic teams, the crew, ball nines, and football squads, while I looked after the proficient and the selected corrective classes.

As I look back at the winter, I shiver at the memory of our arctic quarters. From December to March the thermometer never rose above freezing, and generally it ranged around zero. With hands so cold and fingers so numb that they could not hold the Indian clubs, we valiantly exercised. The iron chest-weight handles and dumb-bells were so cold that there was frequent difficulty in dropping them as the skin peeled from our hands. Our dressing rooms accommodated the first lucky dozen, while the others waited their turn in the great, bleak room. In those days cloth slippers and cotton shirts and tights were the only costumes we knew; for worsted tights and jerseys were not made, and heavy woolen sweaters were unheard of in this country. Notwithstanding these actual hardships, I never saw better spirit, or obtained a better response from my classes than in that winter of 1872-1873 at Bowdoin. Perhaps the sonorous strains of the



military band, which practised in the room above our gymnasium, helped to "whistle up" our courage, and dispel the gloom and bleakness of our catacombs. The results of our work showed what organized classes of college men could do. The attendance, order, and discipline were exemplary. In fact, everything went so smoothly, that I spent six weeks in January at New Haven, to explain, and to try to introduce, the same system at Yale. The fact that three of the classes that went through this grilling year with such good spirit in our improvised gymnasium were involved in the Military Rebellion of 1874, makes its causes and the spirit of the boys more interesting. Certainly there was no spirit of rebellion in the frigid haunts of the gymnasium, and I never felt better repaid for my work than by the spontaneity and vigor displayed by the Bowdoin men, whether inspired by the warmth of my enthusiasm or pricked by the poignant pangs of zero weather.

## CHAPTER XII.

### THE BIRTH OF ATHLETICS AT BOWDOIN.

AFTER the establishment of compulsory gymnasium work in the bleak ramparts of Memorial Hall, Bowdoin came to realize the advantages of organized physical training. One of the most important outgrowths of this consciousness took the form of a slowly awakening interest in competitive sports. Sparring contests and inter-class football scrimmages, inspired by the love of a "scrap," were displaced by a crude attempt to organize clubs and college teams. Intercollegiate athletic associations, and amateur athletic leagues were unknown. At that time, 1872, baseball claimed the only athletic organization. Strangely enough the Bowdoin Club of Boston was one of the first clubs to introduce the modern game into New England in 1859. Later this group merged with the Lowells, whose contests against the Harvard Club attracted much attention and some enthusiasm in the late sixties. Following these pioneers, clubs were formed outside of Boston. The Resolute Baseball Club of Portland and the Dirigo Club of Augusta stirred up a love of sport in Maine. In 1869 and 1870, Bowdoin, following their lead, took up baseball. A college nine, a sophomore nine, and a freshman nine emerged triumphant from the enthusiasm. Their games, however, had a decidedly impromptu flavor, and the wits of the audiences frequently burlesqued the serious efforts of the athletes. Of course as time went on, and the Bowdoin team challenged other colleges, practice started in the early spring, and the critical spectators became loyal "rooters." The serious side of amateur sport quickly asserted itself in competition.

Baseball struggled along in the seventies, while rowing underwent a decided boom, and assumed a primary place of importance. In 1869, after the Harvard-Oxford International match, all New England colleges began to look round in their undergraduate body for a record-breaking crew. In order to awaken interest at Bowdoin, the aquatic enthusiasts arranged for the Bowdoin Regatta on the Androscoggin River, on October 14, 1869.

A few brave souls tried to seize this opportunity to further the cause of field sports. The "Bowdoin Foot Races and Jumping Match" took place on the Sagadahock Driving Park, and consisted of a 1-mile race, a 100-yard race, and a jumping contest. Unfortunately the times were not ripe for such athletic progress, and the spectators looked upon the effort as a joke. The five entrants were allowed to run and jump, but no one aspired to follow their lead. Track was to come later.

But the Regatta did spur on the interest of rowing. The Una and Halcyon Clubs provided the competing crews; Bowdoin did not take part. The first event was a 3-mile race for 6-oared crews for colors and the championship of Maine; the second was a single scull race of 2 miles for a silver cup and the championship of Maine; the last was a double scull 3-mile race for 2 silver goblets.

Bowdoin was awakened. With beginners' enthusiasm, we set about building a crew of our own to send to the inter-collegiate boat race at Springfield. But crews take money and men. We had no money, and our rowing material was limited because our college was small, and we were launching forth in a great and, for us, untried field. Through the serious and persistent efforts of Edward P. Mitchell '71, Freeman A. Ricker '72, and William C. Shannon '72, we obtained enough money to start our crew. For the benefit of the Bowdoin Navy the college gymnastic team exerted itself to its utmost, and gave its first exhibition, after the winter's training, in April, 1872, at City Hall, Portland. Nearly all the members of the prospective college crew took

part in the exhibition, together with some twenty others, true and tried throughout the icy winter.

The crew took to the river, as soon as the ice was out, in a lap-streak barge, lent to us for the occasion. George Price, of the old Paris crew of 1867, was our trainer, and Freeman Ricker stood as rowing mentor. The six men on the first crew were: D. A. Robinson '73, stroke; D. A. Sargent '75, starboard stroke; C. H. Hunter '74; A. W. Crocker '73; A. G. Ladd '73; and W. O. Hooker '72, bow. Our shell and racing oars arrived only a few weeks before the race, which took place about the middle of July. But we had acquired a fairly good knowledge of fast rowing by the time of the competition.

Because custom decreed an almost war-like strategic secrecy, we were quartered 4 miles up the Connecticut River from Springfield, our talents hidden from the public until the honorable moment. On the evening of the race, we rowed down the river to the starting point, to find the contest postponed until morning because of the high wind and rough water. There was nothing for us to do but turn around and row home again, to return the following morning. We did not get our boat put up nor sit down to supper until nearly nine o'clock. This unusual exertion and irregularity in our diet, to say nothing of the colds contracted while we sat around in wet rowing clothes, waiting for the race to be called, threw the crew out of form. We looked and felt ragged when we appeared the following morning. After our preliminary 2-mile pull, we were ready to line up at the start. We had a central position between Harvard and Yale with Amherst Agricultural on the other side of Harvard. We jumped in and held a lead for the first 2 miles. In fact we established a record for a 6-oared 2-mile stretch. The narrowing current in the center of the river must have been responsible for our starting advantage. Tragically enough, our bow gave out entirely after these strenuous 2 miles, and we finished third with great difficulty, behind Harvard and Amherst. It later developed, through the confession of the examining physician in Brunswick, that Hooker, our bow,



who had gone to pieces at the end of the 2 miles, had a decided heart lesion, and should never have been allowed to enter such a violent athletic contest. The poor fellow died a few years later in Europe, and it has always been a serious question in my mind whether the strain of that very contest did not hasten his death. The other five of the mighty crew still thrive, although some have passed, and the others are nearing, their seventieth birthday.

The intercollegiate competition extensively influenced all college rowing as well as rowing at Bowdoin. It presented an annual problem to the college, but it solved a national problem at the same time. Once and for all the superiority of the sliding seat over the stationary one, and the long steady stroke over the short jerky one was assured. Harvard, pulling the slowest stroke on the river that day, came in second, ahead of five others. Yale pulled the fastest, and finished a quarter of a mile behind the winning crew. Amherst won on its remarkable strength, and Bowdoin held its place as a result of its gymnastic training. But both Amherst and Bowdoin were thoroughly exhausted at the end of the 3 miles, and Harvard would certainly have won if the course had been extended to 4 miles. If it were not theoretically correct that a short, quick, powerful stroke is faster than a long, slow, powerful one, the spurt would have no significance. But that race proved beyond a shadow of a doubt that the long stroke is the only practical one. Where one crew can be trained to stand the exertion of the short choppy stroke, a dozen can be made to row 3 or 4 miles in better time with a slow, long oar. Yale's bad defeat led to their sending Robert Cook to England to study the English style of rowing. His observations bore out the conclusions arrived at after the race.

Now Bowdoin's problem of raising, supporting and sustaining a crew had manifold tentacles that slid out to throttle all enthusiastic workers. And Bowdoin's difficulties were common to all small colleges. The financial means loomed darkest as an insurmountable obstacle. Once or twice

the college could look to its enthusiastic graduates and friends to finance its crew, but it certainly could not expect such help every spring. The necessary capital was always the first matter for consideration.

In 1872 the Senior class had contributed the largest part of the boating expenses, and in consequence were entitled to representation in the boat. This obligation presented another serious limitation in a small college where gratitude is obliged to be shown in the selection of the crew. Then, too, the secret societies had great influence in picking the oarsmen, because their strength and power could not be overlooked and often could not be denied. All these considerations weakened the crew. With such obligations, the coach could not select men on merit alone; ways and means had to be considered. And on top of it all, they had only 158 men to select from at Bowdoin. If they attempted to organize different branches of sport, there were not enough athletes to go round; for, like poets, athletes are born, not made. Since it was out of the question to expect a man to devote all his time to athletics, the various sports had to fight for the athletes. To keep up the spirit and the interest, the teams must be fairly successful, and must be composed of men adapted to the sport. It is far easier to turn out a good track team since individual ability counts; but to draw a well matched 6- or 8-oared crew, or a good baseball nine, from scanty material is heart breaking.

It is a wonder that the crews ever survived the training system imposed upon oarsmen in those days. Its faultiness seems incredible to us today. Because our Bowdoin crew of 1872 were largely the product of the gymnasium, the men were strong in the muscles of the arms, shoulders, chest and back, but lacked in general strength and respiratory power. The theory of the coach was that to learn to row was to row. Hence no effort was made to correct this unbalanced development. Some of the men actually fell off during the rowing season in the measurements of the girths of their thighs and

lower legs, and for at least three of them, it was no matter of taking off fat.

Our diet was more remarkable than our training. Water was tabooed and to go to quarters after a long row with a raging thirst, and to be told that we must not drink, for fear of increasing our weight, was nothing short of torture. At table, they deluged us with bread and meat, beefsteak, roast beef, mutton chops, eggs, and milk galore, but no water to wash it down, and nothing sweeter than an occasional bread pudding. On this heavy protein diet, we flourished at first while we built up rowing muscle. As the season advanced, however, we grew irritable and felt as though we would like to chew nails. We became dull, heavy, and lethargic. We loathed the sight and smell of meat. We would gladly have exchanged 100 pounds of meat for one small box of chocolates. The modern physiologist will quickly recognize the need of energy-sustaining food and pure water to drink. We were following certain traditions, much as the colleges follow others, equally absurd, today.

This love of tradition exerted other stupid limitations. Unfortunately at Bowdoin we had no long straightaway, and the best the crew could do was to spurt  $1\frac{1}{2}$  miles, turn, and row back again. The command at the turning stake was always, "Pull starboard, hold port! Together all!" Each time the starboard side pulled twice as hard and swung the boat round. Yet the monotony of the procedure was never lightened by reversing the process; for this was the way it had always been done.

Again the irrevocable tradition decreed that we maintain the "dark horse" notion before the intercollegiate race in 1872. Consequently we were quartered 4 miles from the course, and never allowed to row over the course to become familiar with it. Tradition insisted that our performance should be kept secret in order to startle the public on the day of the race. The practical result of this bit of strategy played into the hands of our opponents. We rowed 8 miles

to and from the course the first evening when the race was postponed, 4 miles to the start the next morning, then 3 miles at racing speed, 3 miles back to the start, and finally 4 more miles to the quarters, making 22 miles of rowing inside of eighteen hours. Yet we believed that we enjoyed the sport. Several of the men were over-trained before we left Brunswick, and to be nerved up to the race in the evening, and then be put off until the next day was fatal to us all. This rowing reminded me of an uphill row in a dory on the Hudson when the cook and I were cast off to tow the "Moses Eddy" past the rocks. Yet we were following traditions beloved by every college man, traditions which I learned at Bowdoin, and which I was destined to fight in my later work.



## CHAPTER XIII.

### THE MILITARY REBELLION AT BOWDOIN 1873-1874

THE first season of the combination between the gymnasium and the military training, 1872-1873, went fairly smoothly at Bowdoin. The men's sense of humor and sporting blood made them heroically indifferent to the inadequacy of the gymnasium; the novelty of military drill made them tolerant of those requirements. In 1873-1874, however, that crisis came which usually does come when a military regime is thrust upon a civil organization in time of peace. Because man is a short-memored creature, the discrepancies of the nation at the time of the Civil War were no longer a glowing issue, much talked of and much deplored, and the arbitrary ruling that is absolutely necessary in military life became irksome and distasteful to the students of Bowdoin. Perhaps, too, the increased vigor of the requirements and the arrogance of the officers brought the situation to a crisis.

The organization during the second year was a little different. The students were divided into four companies irrespective of classes, with officers selected from the two upper classes. Captains, lieutenants, and sergeants came from the senior, and the corporals were drawn from the junior class. Until the first of November all the exercise took the form of military drill; on that date, they reported to the bleak, cheerless gymnasium for their winter work. As in the previous year, I accepted the existing officers as my captains and assistants. The personnel was of a different type than the year before, however, and I soon found that

most of the work, if I looked for efficiency and progress, was to fall upon me. Moreover, the new division of the students, purely by classes, had no connection with their gymnastic prowess. Formerly I had been able to grade my work according to classes, but now I had groups which I could not standardize, and heterogeneous masses for whom I had to make the work uninterestingly simple in order that the least proficient could take part. There was no longer any progressive order. Another difficulty with these divisions was the practical impossibility of arranging a gymnasium program that did not conflict with the academic work, since we had all classes to consider at all times, and not just freshmen engagements to avoid for one class, and sophomore for another. It was uphill work.

Now the monotonous repetition of simple drills with wands, dumb-bells, clubs and weights fills up the time required for exercise, but it does not inspire enthusiasm and spirit for gymnastic work; moreover, while it has distinct hygienic value, it does not make the pupil eager to watch his physical improvement, and measure his strength day by day.

I came to realize that in my desire to help the President and the army leader to establish the military department at Bowdoin, I had seriously injured my own work. I had purchased a uniform and taken part in the drill myself in order to help along the spirit between the gymnasium and the army. But this second year, the officers were non-athletic and knew less about gymnastic apparatus than many of the students under them. As military officers they went through their duty in a perfunctory way which aroused little enthusiasm and the word changed from "Come boys, let's do this!" to "Go on men, and do that." The crowning insult to gymnasium spirit came when two officers stood about and joked about the work that they were leading. The morale was ruined.

As an inevitable result, the students came to look upon their exercise as a tiresome grind which they could cut safely and

frequently. The gymnasium began to pall, instead of amuse, and I shall never forget the dreary picture of that great bleak, unfinished room, its stone walls covered with frost, cold air coming in through every crevice, snow blowing in at the window frames, or water dripping from the floor above during the thaws and rains. Add to these dismal surroundings the half-hearted tutelage of the military organization, and you will picture the depressing problem that we faced.

In spite of the arbitrary divisions, I still clung to my two classes of proficientes who worked under my personal supervision. These men, together with the baseball squad and the crew, worked double time in the gymnasium and worked with enthusiasm and pleasure. The anticipation of showing their prowess to their friends, and the incentive of competition, urged them on to arduous practice day after day. Nor is such spirit vainglorious. Cut the vigor of competition out of the life of a college, and you have left a void which nothing else can fill. The crew and the baseball squad were looking forward to their races and games with other colleges; my proficientes had the exhibitions at Brunswick and Portland in mind. I have no doubt that it was their enthusiasm that made it possible for me to drag through the dreary season of military oppression and inefficiency in the cold gymnasium.

Nor am I blaming the indifference of the average student toward gymnastic work such as I have described at Bowdoin. Those who take part in exhibitions have the pardonable pleasure of exhibiting physical achievement of which they may justly be proud. But the mediocre performer then at Bowdoin had to find all his pleasure in increasing the circulation of his blood, so that he would not freeze to death in our noble building. And such enjoyment is doubtful. Of course there was a physical benefit from the exercise, but under our straggling administration of that year, men could shirk so easily, that there seemed to be no apparent mass improvement. They took the gymnasium work, which should have been a keen satisfaction to any healthy boy,

much as they took Greek, Latin, or mathematics, a requirement for their college degree.

Since it was a requirement like any study, I could not see why the student should not receive credit for his gymnasium as for his academic work, provided he did good faithful work. The Faculty, however, would not consider conferring credit for physical work; for, such was the differentiation between the work of my department and the mental work of the academic field. My only recourse, in order to reach the shirkers, was to strike at the vulnerable spot of attendance. Consequently I marked the unsatisfactory workers but half there. If they were present merely in body, and not in mind and spirit, they did not receive full credit for attendance. By this method I paved the way for academic recognition of physical education.

Somehow or other, we came through the winter term in spite of the grumbling and sulkiness of the rank and file. Our exhibitions at Brunswick on April 3, and at Portland during the spring vacation, were better than any previous display. Bowdoin surpassed the other colleges, partly because our most athletic men had been attracted to the gymnasium as a means of keeping fit for their favorite sports. The fashion then was still heavy gymnastics.

With the spring term, the out-of-door work in military drill began, and I left Bowdoin to carry on a term of gymnasium work at Yale. While I was away, the undercurrent of dissatisfaction swelled with discord and defiance. There had been a feeling of sportsmanship that prevented the outbreak during the winter term in the impossible gymnasium; perhaps our appeal kept them honor bound to make the best of the surroundings. But in the spring with the exercises out of doors, the arrogance of the officers brought about the crisis. Although the military regime was less stringent than it had been at its introduction, there were still five terms of military science in the college course necessary for a degree. One hour every day during the first and third terms, the Freshmen and Sophomores had to take infantry



tactics, which included the school of the soldier, the school of the company, and the school of the battalion, as well as a similar course in artillery tactics. The Juniors studied minor operations of war for one term, and then, with the Seniors, were candidates for commissions.

The customary friction between the two lower classes took on a more serious tone, aggravated as it was by the grievances against the military regime. The officers wilfully and scornfully disregarded all the traditions of the college. The crisis came one spring morning. For days there had been mumblings and rumblings and portents of war. There had been discussions of possible consequences. The matter of guard house and expulsion had been generally discussed in little groups that melted into nothing at the arrival of an unsympathetic scab. Now concerted action in behalf of a cause was not so common in those days as it is today; in other words, strikes were uncommon enough to be startling news for the papers, and a matter of apprehension for the disapproving public. Pupils did not construct and sign petitions as readily as they do today, and faculties did not sense and attend to mass dissatisfaction. Consequently, any protest was discussed long and carefully, and not entered upon carelessly or as a diversion from routine. The Bowdoin students in this instance believed that they had just cause for grievance, and acting with the same spirit as had other Americans about a century before, they announced that they would stand oppression no longer. The Juniors, Sophomores and Freshmen, first straggled, then taking courage as they saw their ranks filling, gathered enthusiasm and poured along to the drill ground. A quiet, calm determination seized them. They stacked their arms, and resolutely turned on their heels. They had defied the Army, but more important, they had less willingly defied the Faculty. There was a seriousness of purpose that could not be treated lightly. The Military Rebellion had taken place. The students waited for the next move—expulsion or guard house. Probably they were well-aware that the bulkiness of their

rebellion, the proportion of the college involved, presented a serious obstacle in the way of punishment. But a defiant attitude toward the military regime and toward the Faculty resulted in the interruption of college work and general suspension. Doubtless with a little tact, the Faculty could have avoided entirely unfortunate affair. Once it had broken out, the matter was difficult to settle.

When the students insisted upon clearing up the matter once and for all, a number of things that had been below the surface came up to light in the general investigations. It appeared that the Faculty, as a matter of economy, had almost decided to dispense with gymnastics and to substitute military training for the physical education. Of course the government furnished the military instructor, whereas the college had to pay a gymnastic instructor out of its own treasury. There was a popular misconception abroad at the time to the effect that the military training, which had been introduced originally to guard against a recurrence of the sad state of unpreparedness in which the Civil War found us, was superior to gymnastic work as physical exercise. This fallacy endured for ten years or more, in spite of the vigorous opposition of the American Association for the Advancement of Physical Education.

Such reports as these came from the schools in which military training was part of the regime. The following statements were compiled by the principals of the public Latin and High Schools of Boston in 1873.

"Your committee believes that the drill as now carried on proves to be not only the best for physical exercise for these schools, but that it, at the same time, inculcates a more manly spirit in the boys, invigorates their intellects, and makes them more graceful and gentlemanly in their bearing."

In 1874 we have a similar statement:

"We trust that the drills will be kept up, believing that committees having them in charge will see that no form of gymnastics could be substituted, from which the boys would derive such benefit."

Again we find the praise re-echoed:-

"No one who has observed the soldierly bearing of the members of our Boston school battalions can have any doubt of its value as a means of securing a full and symmetrical development of the physique."

Such opinions, helped on by the political movement to make places in the schools for Grand Army men as military instructors, presented a serious and menacing opposition to gymnastic training. It lay before the country as an educational problem of the day. My experience in Bowdoin stood behind me as a potent argument for gymnastic work. For the objections against the gymnasium work there had been launched against the military organization of the formal gymnasium drills; while the setting up exercises, which were selected forms of callisthenics and gymnastics, were the features of the military regime which were approved and praised by the critics.

## CHAPTER XIV.

### MY LAST YEAR AT BOWDOIN.

WHEN I look back upon my senior year at Bowdoin, crammed with a multitude of heterogeneous duties, I wonder that I survived. Perhaps the key to the situation lay in the fact that I was twenty-five years old and full of energy. The Military Rebellion served its purpose, for in the face of the events of 1874, my last year at Bowdoin, the authorities withdrew the military requirements, and virtually admitted their defeat in the following notice: "Each student, not for sufficient reasons excused by the Faculty, will be required to elect between the gymnastic and the military exercises." By this concession Bowdoin not only gave the students a loophole to escape the military work, but also introduced that bugbear of curriculum, the elective system. Practically every one elected gymnasium work. It was no longer possible to get a battalion or even a company together.

In the absence of the drills for autumn and spring exercise, we had to open the gymnasium at the beginning of college, and conduct out-of-door athletics as long as the weather permitted. As usual, the funds for the gymnasium were not forthcoming, and the cheerless prospect of a long dreary winter in our refrigerating plant, trying to work up our circulation while our fingers ached with cold, took all my enthusiasm for continuing gymnastic classes during the cold weather. I had carried on my work with such surroundings since 1869, and I knew that, with Herculean effort, I could do it again. However, the facilities were so meager, that, with the approval of the authorities, we agreed that as long as Bowdoin was too poor to afford anything better, I was too poor to get along without something in the way of apparatus,



and that we should close the gymnasium for the winter terms.

Consequently I left Brunswick in January to work for three months in the Yale Gymnasium. In April I returned to start my spring work. Besides the regular gymnastic work, I had the supervision of the college crew, which was preparing for the great intercollegiate regatta at Saratoga. The work that spring was very gratifying, and we never had a finer exhibition than at Commencement in 1875.

Now so far, I have recorded nothing but the ups and downs of the gymnasium at Bowdoin during my four years residence. My primary object in going there had been to secure a college education, and this motive remained paramount. Sometimes it seemed as if my studies, sandwiched in between my duties as Physical Director, were in grave danger of being crushed. I managed to survive, however, and took my degree with my class in 1875. Owing to my two leaves of absence at Yale, it proved to be a real ordeal to keep up with my class. Every day, I had to spend several hours in the gymnasium, and frequently more than that. My first interest, sleeping or waking, was supposed to be the gymnasium, and for the most part, it was.

But perhaps because I was old enough to appreciate the academic side of the college, and perhaps because my experiences in the outside world had taught me the value of a college education, I hammered at my studies with sometimes more persistence than wisdom. Looking back upon the subjects, it interests me to see which have proved most useful to me in my work, which have given me most pleasure in their knowledge, and which could have been omitted without seriously detracting from a liberal education.

Much as had been my preparation at Belfast, my later college work also was interrupted by gymnastics. Consequently, in Greek and mathematics, I was not so thoroughly grounded as I should have liked. Moreover, I came to wish that I had devoted more time to Greek life and less to Greek letters. Early in my career, I switched from a purely classical

to a partly scientific course. The Greek and Latin served me to good stead in my later study of medicine, but I have always regretted that I did not go further into mathematics. I have often felt the need of it in the statistical work that has arisen in connection with my profession. My German and French are limited to a not too fluent reading knowledge while I wish that the two terms which I devoted to chemistry and physics might have been two years. Naturally enough I found the greatest interest in zoölogy, physiology, and botany, for they were preparatory to my studies in medicine. The usual smattering of geology, political economy, intellectual philosophy, moral philosophy, constitutional law, and evidences of Christianity were all crowded into my senior year, and although my knowledge of them was necessarily superficial, it served to open the subjects to me sufficiently to enable me to enjoy them in later life. I believe that such a variety of interests means a liberal education.

In one of my philosophy courses, I came upon a book by Mark Hopkins, D.D., LL.D., scholar and philosopher, entitled "An Outline Study of Man or the Body and Mind in One System." This convinced me that I stood on firm ground in my chosen profession of Physical Education. In his book, Dr. Hopkins undertook to unify the body and to show the interdependence and interrelationship of all its parts. From him, I came to realize the fundamental bearing which my gymnastic work had upon the great subject of education. Hopkins' opinions were always sound and universally valued. When some one asked President Garfield a few years later to define a university, he said, "A pine log with Mark Hopkins at one end, and James A. Garfield at the other." And the other book which stirred me, while it roused the rest of the world, was Charles Darwin's "Origin of Species." Such stimuli necessarily set me thinking along new lines. My old convictions held good, and weathered all my collegiate doubt. Fortified with the background of a college education, I set out to conquer.

One outlet for an expression of my beliefs came to me in

the shape of the competitions which the English department conducted. Under the inspiring guidance of Prof. John S. Sewall, the members of the English Composition Course entered the contest the freshmen year, and continued through the sophomore. The third year, it was narrowed to twelve competitors, when each survivor prepared an essay that took from eight to ten minutes to deliver. This was the essay in which I threw down my glove to the public. I had been engaged in some phase of the practice or study of Physical Education for ten years, two years at the Belfast High School, two years as a professional, and six years at Bowdoin, with twenty-six weeks of valuable work at Yale, instructing in gymnastics, and making physical observations. All the knowledge and data which I had collected I used in the preparation of my Junior oration, "The Limit of Human Development." I had arrived at the conclusion which I have always since maintained, that to try to outdo the favored few, as does the genius of the world, to specialize in one form of exercise, or to develop the mental side of one's being at the cost of the physical, or *vice versa*, is not to reach the highest human development. I had found men accustomed to some special form of labor over-developed in the muscles which they used, and under-developed in those which they did not call into play. I found oarsmen whose backs and legs were highly developed, but whose shoulders and chests did not compare with those of the lumberman. And these observations of the physical deficiencies applied similarly to the mental and moral abnormalities. The Greek athletes are recorded as sluggish men, dubious in health and short-lived. I saw that the over-development of any faculty meant the dwarfing of another. The starving of the sympathies and the chilling of the affections are proportionate to the cold-blooded cultivation of the mind, and it seemed to me then, as it seems to me today, that extreme specialization does not mean the limit of human development, and that the highest state of body, mind or spirit is an abnormal state. The long and arduous practice, which special training of any kind

requires, uses up the nutrition of parts unexercised, and eventually diminishes the energy of all the faculties except that particularly concerned. Consequently, if it be true that no part of our composite organism can reach its highest degree of perfection except by injury and peril to others, and if even our spiritual faculties cannot attain supremacy except under abnormal physical or mental conditions, it follows that perfection of man on earth, whatever may be his condition hereafter, comes not from the surpassing development of his highest faculties, but in the harmonious and equal development of all. Such was the thesis of my collegiate eloquence. I mention this in detail, because it serves as a forerunner to my contention that gymnastics and physical training are intended for the masses, and athletics for the many instead of the favored few.

With my senior oration, "Does Civilization Endanger Character?" I was lucky enough to win the four-year competition, and the incidental \$60.00 prize, not so incidental then. Commencement came, and my work as an undergraduate was ended. I was quite ready for a rest before the next undertaking in my fascinating yet arduous profession of Physical Education.



## CHAPTER XV.

### FAREWELL TO BOWDOIN.

Now the faculty at Bowdoin was not thoroughly satisfied with the way that the military drill had been whisked out of the curriculum by the new elective system. They wished to lay out a definite course of physical education, and since I had been giving only part time to the gymnasium while I was a student at Bowdoin, they desired to know whether my plans for the next year would coincide with theirs. Consequently, just before commencement, I made a report of my six years work at Bowdoin, and laid out a tentative outline which I hoped to carry out the next year. Owing to the radical changes that have taken place since 1875 in the management of a gymnasium, I am going to quote parts of the report.

I had been giving for the closing year, 1874-1875, from two to four hours a day to gymnastic work. The attendance had been good, and the deportment quite satisfactory. The average health of the students was vastly improved, and many people commented upon the high tone of the college morals. I believed that this moral standard had been effected by the newly-awakened interest in gymnastic exercise and athletics.

My report went on to describe the equipment with which I worked and the finances of the gymnasium. In that day it was all sober reality: today the conditions seem absurd and impossible. I will quote exactly: "I have been hampered considerably during the past year by the dearth of implements to work with. The usual misunderstanding, concerning our running expenses (including lighting, repairing, stoves,

scrubbing, brooms, water pails, etc.) and our appropriation for apparatus, has flourished.

"This has been a great source of annoyance to me ever since I have been connected with the college. For some reason or other this department is run on a different basis from all the others. In the fall of the year and during the winter, there is a great deal of work to be done about the gymnasium preparatory to the time for regular exercise. There are four fires to be made, twenty-five lamps to be trimmed and lighted, water to be brought, rooms to be swept, and many other little things incidental to running the department. This should not be the regular work of an instructor, yet there is no provision made to pay another person for doing it. If a student rings the chapel bell, or sits an hour a day in the library or reading room, he receives his tuition for his services, but if I employ a student, who is poor and needy, but willing to work, to act as janitor of the gymnasium, he is not entitled to his tuition, but is paid for his services out of my appropriation for apparatus. In one or two instances, students have resigned this enviable position after a term's trial, for the simple reason that it is much easier to obtain a scholarship and do nothing, than to get their pay for services rendered in the gymnasium. During the past year, it has taken \$50.00 of the \$100.00, which I supposed was appropriated for apparatus, to pay for the services of a janitor. Considering the amount deducted for incidental expenses, it left me but little over \$25.00 for apparatus. I have frequently been obliged to advance money for appliances and wait until the end of the year for my pay. For some of this outlay I have never been repaid, and I claim it as my personal property, although used daily by the students. I do not think that this is as it should be, and I am eager to make a different arrangement."

Then I went on to answer their question about my future plans. I had made partial arrangements with another college to manage their gymnasium, provided that the gymnastic work at Bowdoin was discontinued. I was, however, quite willing to remain at Brunswick, if new arrangements

could be made to alleviate the problem of constant financial difficulties. At this point I drew up a detailed explanation of the frenzied finances, and I fancy that this part of the report may be of amusement to any young people now starting out on a teaching career. And there is more cry today in behalf of the low-salaried teachers than there was in 1875!

“My salary for the past year, I consider no compensation for my services. It was the same as that which I received upon assuming my present position here six years ago. Since that time my department has grown in size, the exercises have been made obligatory, my duties have been increased threefold, and my responsibilities fourfold. In spite of every opposition, I have succeeded in making the gymnasium a popular institution and I now modestly, though firmly, declare that the system of physical culture pursued at Bowdoin today is second to none in the country. Notwithstanding this, I am receiving for my services, less than half the pay of any other person filling a similar position. In 1869, I left the business of a professional gymnast, in which I had received a most thorough and careful training, and in which I could command a salary ranging from \$50.00 to \$100.00 a week, for the purpose of obtaining a college education. My salary at Bowdoin for the first two years did not cover my expenses and I was obliged to pay for tutoring, books, and so forth, from the money which I had previously made. At the beginning of my sophomore year, I was offered a position at Yale as instructor in gymnastics. Not wishing to break up my college course, and feeling unable to enter there and keep along with my class, I declined a permanent position and entered upon a short engagement for which I received \$50.00 a week. Since that time, I have devoted from five to twelve weeks a year to that outside work (while the military drill was enforced) and have since been able to live upon my salary.

“At the beginning of my engagement at Bowdoin the students were charged \$2.00 a term as a gymnasium fee,

whether they enjoyed the use of it or not. (Refer to College Records).

"Two or three years later, when the tuition was raised from \$20.00 to \$25.00 a term, this amount for use of gymnasium and for receiving instruction was reckoned in with the \$25.00. The gymnasium fee was therefore averaged for a while in the general tuition, but still exacted.

"At a meeting of the boards early in 1874, the sum of \$1.50 per term was charged for the use of gymnasium, thus making in all \$3.50 per term for each student. If I have not been misinformed in regard to this matter, the gymnasium at present is a source of profit instead of expense.

"I will accept the position of Instructor in Physical Culture for the next year for \$1200.00. I will furnish my own apparatus, pay my janitor, monitor, and assistants, and stand all other expenses incidental to running the gymnasium, except for heating, lighting, and repairing the building.

"I will conduct the gymnasium personally under the required system, as now, during the fall and summer terms. I will devote as much time to voluntary exercise as is necessary to keep up an interest and meet all demands. I will give at least one public exhibition a year and more if required. I will superintend the field and aquatic sports and do my best to enhance the reputation of the college in this respect.

"During the winter term, I shall be away. I could not, nor should not, attempt to conduct the required system throughout this term even if I were here, because I consider it impractical under existing circumstances. It is a broken term, and most of my officers and leaders would be out teaching during the early part of it. The gymnasium is so cold that I should be obliged to use my utmost exertions, not only in keeping up an interest, but in preventing an outbreak, which might terminate in another rebellion.

"I will, however, arrange a system of regular exercise for this term. I will issue at the close of the fall term a series of cards with all the exercises in clubs for the winter term. To execute these movements fifteen to thirty minutes daily



practice will be required. It is impossible to cram this work into a week or fortnight. I will appoint leaders from each class who may be consulted for the interpretation and execution of the different manoeuvres. I will issue portable apparatus to each student to take to his room and keep until the beginning of the summer term. At the close of the winter term I shall require each student to pass an examination in the exercises assigned, and I shall request that the Faculty enforce this examination as they would any other college exercise. This is the plan introduced at Yale last winter and it worked admirably.

“If it is deemed advisable by the Boards or Faculty to have the gymnasium opened during the winter for voluntary exercise, I will employ a man to open and close it, to build fires, and to take charge of the room and apparatus.”

Today any man who offered such a financial arrangement would be considered demented. Bowdoin, however, looked upon my suggestions as lavish and rejected my offer. I returned to Belfast for a summer vacation and a long rest. The combination of my gymnastic and academic duties, to say nothing of the social requisites of Commencement, proved to be too much for me. I did nothing but eat and sleep for about four weeks. I was not ill, I was simply subnormal. Later in August, while I was practising in my improvised gymnasium, because of my poor condition, I met with an accident, which did not cripple me at all, but which depressed the lower part of my breast bone and caused me a good deal of trouble. This experience clinched my half-made plans to go to Yale and study medicine. With this end in view, I went to New Haven in September, 1875. As a result of my senior year at Bowdoin, I learned not only that there should be a limit to human development along any one line, but also that there was a limit to the expenditure of human energy, and that absolute rest from mental and physical effort was sometimes necessary.

## CHAPTER XVI.

### AT YALE.

AT Yale I repeated my entire experience at Bowdoin but under more favorable working conditions, and without military interference and the resultant rebellions. Consequently I feel that I can describe my work at New Haven in much shorter space than that which I devoted to Bowdoin, not because it was a less significant experience, but because of the similarity in the details of the work upon which I have dwelt already in the last chapters.

I began to instruct at Yale in January, 1873, when I left the refrigerating plant at Brunswick for the winter term to alleviate my financial distress, without giving up my work at Bowdoin. When I first went to Yale, attendance at the gymnasium was voluntary for all classes, and correspondingly irregular. My problem was to reorganize in such a way that the work would become popular enough to command a large attendance; I could not hope for compulsory physical exercise. Just as at Bowdoin, I drew round me first the natural athletes who enjoyed the work, and then relied upon their enthusiasm to attract the non-athletic men.

The gymnasium itself was at least a fact, in which existence it triumphed over my former situation. It was open daily from 8 in the morning to 10 o'clock at night, with no supervision, and no direction more serious than admonitions from the janitor, who lived with his family in a suite of rooms on the mezzanine floor in the front of the building. The building itself was better than the average for those days. In the basement there were 8 or 10 bath-rooms, all furnished with long zinc-lined tubs. Although there were no showers or spray baths, there was plenty of hot and cold

water, a luxurious abundance in fact. But for this luxury every student had to pay; a free bath was unknown. Besides the baths, there were 4 bowling alleys in the basement, and a baseball cage on one side about the width of 2 alleys.

The building, 150 feet over all, had a large exercising room, 80 by 50 feet, with cross timbers 25 feet from the floor. A running track, canvas covered and filled with about 4 inches of sawdust, extended around the room. Over the track, along one side of the room, there was a series of travelling rings, placed 9 feet apart and 8 feet from the floor, and, on the other side, a horizontal ladder hung about 7 feet from the floor.

The equipment consisted of the usual German heavy apparatus. Two long rows of parallel bars, varying in height, fenced off two sides of the room inside the track. Vaulting bars, horizontal bars, flying rings, climbing ropes, double trapezes, climbing poles and a set of rack bars, were a few of the regular appliances. Two long spool ropes, inclined at about 45 degrees and parallel to each other, about 18 inches apart, ran along the lower end of the room. In front of the ropes, two pyramid or peak ladders, 30 feet apart at the base, extended to the tops of the cross timbers. At the same end of the room, they had 6 pulley-weight rowing machines arranged across the room, 6 or 8 pairs of old-fashioned pulley weights imbedded in sawdust at the front end of the room, and a few heavy iron dumb-bells and Indian clubs tossed carelessly on a straw matting in one corner. There was also a lifting machine, with about 300 pounds of iron weights, also a sand bag, weighing some hundred pounds, which was used for a punching bag. These appliances, together with a leaping board, a spring-board, and two large corn-husk mattresses, 12 by 8 feet and 10 inches thick, constituted the entire equipment. The spring-board, I would have joyfully dispensed with; for it was a noisy contraption that took up space. Whether or not the clatter fascinated its following, I do not know, but I do know that it was constantly in use and never silent. All the apparatus was of the

style popular at that time in New York and New England, crudely constructed and clumsy. The kind and quality of material, the shape, weight, size of bars for grasping, methods of supporting, adjusting and fastening the apparatus, in short, all those essentials, which make for good or bad equipment, were left to the college carpenter and his helpers, who knew little or nothing of the delicate construction of gymnasium appliances.

This apparatus reminded me of the old fashioned sleds, skates and boats which the experience of experts has modified so successfully. They were sure to be improved; but in the meantime, they discouraged rather than encouraged physical exercise. The nature of equipment largely determines what men will do. If it causes physical torture, instead of physical pleasure, men will not use it. Moreover, if it is nearly impossible to accomplish what the apparatus calls for, the men are bound to lose interest, for much of the joy of physical exercise comes from the satisfaction of accomplishing some definite feat. Since I could secure no appropriation from the administration for new equipment, I used my own as far as it would go, and began the same struggle for financial recognition of the gymnasium, which I had waged at Bowdoin.

It was much the same old story. The natural athletes came to the gymnasium, while the non-athletic men, who needed the exercise, stayed away. And again it was incumbent upon me to devise a scheme that would catch a larger proportion of the college in its meshes.

I must pause here, however, to say a few words of the regular workers with whom I began my work at Yale. The progress which they made in tumbling and leaping amazed me. Intercollegiate athletics did not start until 1874, and the cream of the athletes found their way to the gymnasium in 1873. Since all men enjoy doing those things in which they excel, I collected a team whose enthusiasm and skill equalled anything that I have ever seen. Three men particularly impressed me, Saltus Clark, Cortes Maxwell, and



Alec Nevins. Clark, a graceful and finished gymnast, could do a double forward somerset from the leaping board. Nevins and Maxwell developed such skill in tumbling and leaping that they made records in running and jumping for Yale at the Intercollegiate Track Meet at Saratoga the next year. A young man named Bennett was expert on the flying rings, and a freshman, one Kelsey, was able to pull his weight up three times with his right arm and twice with his left. Julian Kennedy '75, the strong man of the group, and David H. Kellogg '76, both rowed on Robert J. Cook's celebrated crew that distinguished itself at Springfield in the summer of 1873, and also on the Centennial 4-oared crew that made an excellent record in Philadelphia against the English crews. In 1875, William J. Wakeman, who was also in this pioneer group of enthusiasts, made a record in the high hurdles. With this brilliant team, we gave our first exhibition, in March, 1873, at New Haven. Just as at Bowdoin, I relied upon the skilled athlete to arouse the interest of the other students and to attract them to the gymnasium with their tempting wares.

In 1874 I returned to Yale for the spring term. This second year, the voluntary class in heavy gymnastics was so much larger that I had to divide it and establish a standard for my first class of proficient. Every man who entered this class had to be able to chin himself at least twelve times without stopping, and push his weight up between the parallel bars as many times. If a man could pass these requirements, the muscles of his upper arms, chest, shoulders, and upper back were necessarily well developed. Such men were qualified to go on rapidly in heavy work. It is always dull for men to do over and over those things which they find easy, but it is dangerous to push a class on to interest the proficient at the cost of discouraging the others. I announced my program and my intention to work the beginners into the proficient class as quickly as I could. In gymnastics it was much the same as in music. The teacher was eager to interest the pupil in a

piece as soon as he had mastered the five-finger exercises. I was quite as ambitious as my pupils; I wished to see them all playing pieces. Our exhibition of 1874, for the benefit of the Yale Athletic Association, was managed by Elmer P. Howe, president of the Yale Navy. The stunts surpassed those of the year before; for we had a much larger number of men from which to draw. The public and the college saw, really for the first time, what the gymnasium could offer to the student body. The year before we had shown a team of skilled performers, whose work was equal in many instances to that of skilled acrobats and which was consequently discouraging to the aspirations of the average student. The exhibition this year, calling for strict training as it did, benefited the performers as well as the prestige of the gymnasium. Training was in order everywhere; and the enthusiasm knew no bounds, for while these men were preparing for the public performance, the crews worked at the rowing machines and running track, and the candidates for baseball were busy in the cage, and I made special appointments for boxing and fencing. With the regular gymnastic classes added to these outside activities, I had quite an organization in the gymnasium by the spring of 1874.

Yet in spite of the growing organization the same discrepancy existed that had bothered me at Bowdoin. While the athletes of the college were getting all the exercise that they could, the non-athletic men, who most needed it, were having nothing at all to do with the gymnasium. Consequently, the next year, 1875, the Faculty devised a plan by which I could catch the freshmen as a class. Up to that time, the freshmen had had a prescribed hour of Greek every Saturday morning. Under the new arrangements, they were allowed to choose between the Greek and two thirty-minute periods of gymnastics during the week. By taking the hour of gymnasium work, they saved another hour necessary for the outside preparation of their Greek lesson for Saturday. The plan worked like a charm; all but two or three men elected gymnasium work.

In those days, the freshman class numbered about 180 men. We divided it into three divisions, A, B, and C, and subdivided these divisions into two groups of 30 men each. The groups were assigned on the basis of scholarship, the A-1 and A-2 division coming first. Moreover the Faculty backed me in holding the men responsible for their gymnastic work, exactly as they would have held for their Greek.

For apparatus we used wooden dumb-bells, weighing 1 to 2 pounds each, and wooden Indian clubs, 2 to 3 pounds in weight. The thirty minutes was divided into two fifteen-minute periods, one with dumb-bells, the other with Indian clubs. The work was arranged to bring the principal muscles of the arms, trunk, and legs into action, and was fairly strenuous. Since we could not provide the students with gymnasium suits, and since we did not have facilities for 30 men to change their clothes and bathe at the same time, they worked in their shirt-sleeves. It was necessary for me to keep them just short of the perspiring stage.

At the end of the winter term, we held a formal examination with three men appointed by the Faculty to act as judges. They marked the Freshmen on their form, accuracy, and execution. For this examination, every division had a leader chosen from its ranks, to conduct the exercises with the clubs and dumb-bells. One of the divisions chose William H. Taft, of the class of 1878, for its leader. And of further interest is the fact that this year, and for several years following, when this same examination was concluded for freshman classes, the first division in scholarship proved always to be the highest division in gymnastics, while the third division in scholarship ranked lowest in gymnastics. This was the first time that I had an opportunity to compare physical and mental powers, but it all went to bear out my theory of the close relationship between mind and body.

## CHAPTER XVII.

### YALE MEDICAL SCHOOL.

A NEW epoch in my work at Yale began in September, 1875, when I entered the Medical School. I believed that in Physical Education I had an interesting and useful profession, and I was then convinced that medical training would be almost essential to my success. In the Medical School I soon found that I was too busy to give much time to the gymnasium. I continued my work as a sort of general director, but could conduct few classes in person. However, I did teach volunteers one hour every day, and I carried on the freshman classes twice a week.

While in the Medical School, I was often urged to go out for football or other athletics. I had always wished to play football in particular, but I was afraid of getting an injury which would cripple me for my gymnasium work, on which I depended for my living. After a little practice with the shot and hammer, I fancied that they made me slow for boxing, a necessary adjunct to my profession. And while at Yale I did a bit of boxing on the side. Some of these friendly matches proved most interesting. One of the hardest men that I encountered was Robert J. Cook, then in his prime as leader of rowing at Yale. He was a little slow, but a tremendous hitter when he landed a blow. Besides, he could stand much more punishment than the average man, and could tire his opponent by making him wage a strenuous offensive which he received with scarcely a quiver.

But boxing and gymnasium work were not the means by which I won the greatest distinction among my comrades at the Medical School. It happened one day that a patient came to the hospital to have his leg reset. First it had to be



broken at the thigh. An apparatus resembling a big nut cracker had been made for the purpose, but each time that they applied pressure to the levers, the limb rolled over and they could not break the bone. The patient had been under ether for some time, and Dr. Francis Bacon, the surgeon, was becoming anxious. Finally a couple of boys laughingly suggested drafting "Hercules" into the arena. Dr. Bacon asked them what they meant, and they told him that they thought that I might be able to break the bone. I was summoned. So far I had never exerted my strength for the purpose of breaking bones, but I was glad to do what I could for Dr. Bacon. They rolled up a big double blanket and fastened the ends together to form a loop. One end of the loop passed under the man's thigh, while I placed my head and neck through the other end. They padded my right knee which I rested on the limb. Then I straightened up my back and the bone snapped. I was quite ready to lie down when the thing was done; for the combination of the ether fumes and the feeling of human flesh and bone crumpling under my efforts were too much for my nerves.

I finished my medical studies, graduated from the Yale Medical School in January, 1878, and received the degree of M.D. Until April, 1878, the end of the winter term, I continued my gymnasium work at New Haven. Most of my spare time I spent in the library, devising a system of physical education which would be adaptable to our American schools, colleges, and universities. I believed that my experience in the schools at Belfast, my six years at Bowdoin, and my six years at Yale, culminating in a complete medical course, ought to put me in a position to work out a satisfactory and efficient course in physical education. I talked with President Porter and asked his advice on the matter of my taking up physical education as a profession. He discouraged me in every way. He could offer me no hope of an opening at Yale, and he even thought that the work was unworthy of a college-bred man.

Nevertheless, I submitted a tentative scheme for Yale to a

committee appointed by the Faculty to consider the matter. This committee consisted of Professors Thomas A. Thacher, Eugene L. Richards, and Henry P. Wright. Any Yale graduate of about 1870 or 1880 will recall these very able men. Professor Thacher had had the gymnasium under his supervision for a long time, Professor Wright was in charge of the required gymnastics for freshmen, and Professor Richards was interested in gymnastics and general athletics, because he believed that a serious injury, which he received in the gymnasium when he was in college, could have been prevented if there had been proper directorship.

The committee with whom I discussed the details of my new scheme were most enthusiastic about it. They reported favorably to the Faculty. But since the plan called for considerable alteration of the gymnasium, a general recognition of the subject, and a faculty appointment, as well as a living salary for the Director, it was considered too formidable. Since there was no chance for me to begin at Yale, I wrote to ten or twelve college presidents in different parts of the country to propose my new department of Physical Education for their institution. I regret now that I did not preserve the answers to some of these communications; for in the light of later developments, they would have made interesting reading. For the most part, of course, these letters were polite and courteous, but not one of them left a shadow of a doubt as to the absolute impossibility of establishing such a department in any of the colleges concerned.

So, in 1878, I found no college in this country ready to introduce a course in education which would teach in a practical way the principles which I had learned both in my academic studies and in actual work. I suggested in this course to give applied physiology and hygiene, applied psychology, sociology and ethics, all in connection with physical training. But no one would listen. My fight was no longer with the boys, but with those higher up.

## CHAPTER XVIII.

### NEW YORK.

OF course, I was keenly disappointed to discover that after my long preparation, no one was willing to let me practice my chosen profession. My outlined course, which seemed only logical to me, appeared impossible to everyone else. I had counted on an appointment at Yale, and when it failed me, and all the other colleges wrote politely non-committal letters, I saw that I would be obliged to find a new field for my endeavors. But in order to keep my title of Instructor in Gymnastics at Yale College, for the prestige which it carried, I continued my work which I had inaugurated with the freshmen. Every Saturday morning I was to give a lecture in personal hygiene, and follow it with one hour of practical work in the gymnasium. Outside of that engagement, my time was my own, and it was my problem to fill the vacancy.

I left New Haven in May, 1878, with the intention of settling in New York. My purpose in choosing that city was the opportunities which it offered for clinical work. I arranged to attend the clinics of Dr. Abraham Jacobi on children's diseases at the New York College of Physicians and Surgeons; of Dr. Paul Mundé on women's diseases at the Mt. Sinai Hospital; and of Dr. Edward Seguin on nervous diseases. Through these clinics I could acquire a more thorough and practical knowledge of the diseases which were most responsive to physical treatment. My special interest came to be the possibility of strengthening sickly women and feeble children. The idea of reaching the mind of a defective child through the training and education of the muscles of its body, especially by teaching it to use its hands mechanically, was a revelation to me. When Dr. Seguin worked

these miracles, I became more and more certain of the importance of physical activity as an educational factor. In these clinics I also learned the value of regulated physical exercise as a cure for nervous irritability, and as relaxation for a tired brain. Moreover, when I discussed the prospects of my career with prominent doctors in the clinics, they encouraged me in my project. The first step toward proving my theories was a workshop of some kind or other. Men like Dr. Austin Flint, Dr. Fordyce Barker, and Dr. Agnew favored the principles of my undertaking. Accordingly under such auspices I set about to open a hygienic institute in New York, designed to build up those men, women, and children who were naturally weak, or who had run down in the race of human endeavor.

I was fortunate enough to have as a friend and adviser that human dynamo, Mr. William Blaikie. Never have I known such a bundle of exuberant energy. If ever I became discouraged, or doubted my convictions, I had only to go to Blaikie for courage and reassurance. He insisted that he saw thousands daily on his walk to and from business who cried for physical improvement. His enthusiasm kept me on the crest of the wave.

Blaikie was a Harvard graduate, who by perseverance and pluck had made an athlete of himself. In college he was captain and stroke of one of Harvard's winning crews. He maintained his physical condition, and I knew that he had attained it, by systematic physical exercise. He could put up a 100 pound dumb-bell with either hand; he was an example of a harmoniously developed athlete. He was determined to develop the swarming multitudes of New York. Through him, I also met General Thomas H. Hubbard, a Bowdoin graduate, and one of New York's leading lawyers. He was so enthusiastic about gymnastic exercises that he had a gymnasium in the top story of his Thirty-ninth Street home, where I went frequently to exercise and box with him. The practical approval of these two men and that of business men and others, whom I met through them, together with



the professional approval of those doctors whom I have mentioned, launched me on my course.

I first had to find a suitable location for my "Institute," and after looking at about every vacant building in New York, I decided to lease Fifth Avenue Hall, on Twenty-fourth Street, near Broadway. The location of this hall proved ideal. It stood directly behind the Fifth Avenue Hotel on the old site of the Fifth Avenue Theatre. I agreed to pay \$2000 a year rent, and to furnish my own heat, light, water, and janitor service. With such a formidable beginning, I set about to get my apparatus together. Now in those days there were no gymnasium supply houses; I had to draw my own plans, and have the apparatus made under my immediate supervision. Fortunately I had already planned some of it for the gymnasium which I had hoped to see constructed at Yale. I returned to New Haven and engaged a carpenter, whom I knew, to build my long ladders, poles, bars, and special apparatus. Then I continued on to Portland to supervise the construction of my iron work.

At Portland I met my old friend John Dolt. Partly for the pleasure of it, and partly to keep in condition while I waited for my apparatus, I engaged in a good deal of exercise with him. My stop in Portland was a thoroughly enjoyable respite from the frenzy of preparation.

From Portland I went to Belfast to pick up some apparatus which I had stored at home, and to tell my friends and relatives of my new enterprise. Everyone promptly disapproved, and pointed out to me that I was a complete idiot to deviate from the usual course of young men who had graduated from medical school. My family dwelt upon the financial liabilities, and although they did not say it in so many words, they implied that a fool and his money were soon parted. With allusions to their unquestionable right to advise me, they reminded me of the savings which my efforts had cost me, and begged me not to throw them to the winds. My college friends, almost to a man, sniffed at the use to which I was turning my college education, and my

associates at the medical school insisted that in my radical departure from the old school of medical practice, I was entering upon a career of medical quackery. Although I listened to them, I remembered the encouragement which I had received in New York from men whose knowledge of my case and of existing circumstances seemed more valuable to me than the judgments of well meaning but uninformed friends.

My apparatus was completed and shipped to New York from New Haven and Portland about the middle of September. As a preliminary to the opening of my Institute I decided to educate my public through a circular. A little paper booklet of 16 pages, 6 inches long and 4 wide fastened together with a cotton thread, did not look much like the imposing notices sent out by schools today. The cover, like the rest of the book, was of plain white paper. There was no attempt at ornamentation, unless we consider the printer's efforts as a matter of decoration. Of the nine lines of printing, announcing the opening of the "Hygienic Institute and School of Physical Culture, at Fifth Avenue Hall, Twenty-fourth Street, near Broadway, conducted by Dudley A. Sargent, A.M., M.D., Instructor in Physical Culture in Yale College," no two lines were set in the same size, or even the same kind, of type. Were I a printer, I would describe the varieties; but let it suffice that there is low round lettering, and tall thin lettering, black shaded and light illuminated lettering. My name appears in the blackest of black shaded block, while the name of the school contains four distinct kinds of letters. Taste in printing in those days was different, and my printer was eager to give me variety.

The contents of my circular, however, are not so out of date today as its cover. After the statement of the hours and terms, and after an irreproachable page or two of testimonials, I wrote 9 pages in which I embodied my theories of physical exercise. It was the first publication of my beliefs. During my medical studies I had seen a great deal of sickness and suffering which I believed could have been prevented.

To sit in an office and wait for the results of ignorance in the form of disease to come to me for treatment, struck my youthful energy as supine. I felt that I had seen a gleam which I must follow, and that gleam was preventive medicine. Consequently this was the keynote of my appeal to the New York public. I hurled myself at the goblin, disease, from an unconventional angle, with all the sincerity and force that was in me. I sought something tangible to grasp; I wished to fortify well people rather than minister to the wrecks of humanity. This was the boundless ambition of youth which I voiced in my first circular.

## CHAPTER XIX.

### A WINTER IN NEW YORK.

THE gymnasium opened on November 1, 1878. My hours were from 8 in the morning until 10 o'clock at night. There were classes for men and classes for women who came for medical treatment; then there were development classes for men, for women, and for boys and girls. I gave a special training course for teachers, special treatment for invalids, and devoted certain hours to consultation and examination. Each night I felt that I had done a whole days' work. Of course the diversity of my classes required assistants; for even if I had had the time, it would have been physically impossible for me to go through all the exercise, which I prescribed, with each patient as he came along.

As soon as the gymnasium was opened, I began to receive callers, some curious, some skeptical, and some who came to sign up for membership. By the middle of the winter I had 200 names or more on my books, about 100 men and 50 women, and 50 children. For development classes, I charged \$12.00 a year for children, \$15.00 for women, and \$20.00 for men. My teachers' course was \$100.00 a year. I had different prices for medical treatment.

	Ordinary.	Special.	Invalids.
One month . . . .	\$10.00	\$15.00	\$20.00
Three months . . . .	20.00	30.00	40.00
One year . . . .	50.00	75.00	100.00

My building had the shortcomings which all my gymnasiums so far had suffered. The main room, on the third floor of the building, about 80 feet long, 50 feet wide and 20 feet high, was quite satisfactory. It was lighted by a large skylight, and was airy and pleasant. But, and herein lay the old trouble, it lacked proper dressing and bathing facilities.



The dressing rooms and offices were set off by thin pine sheathing, and were entirely inadequate. Moreover, at the end of the season, I had reached the limit of my capacity, and if I had stayed a second year, I was planning to rent the hall underneath for dressing-rooms and baths. After ten years of practical demonstration, an important fact was realized: every gymnasium should contain as many feet for dressing-rooms, lockers, and baths as for exercising space. Without such accommodations, the exercise is unhygienic and often futile.

The equipment of my gymnasium resembled the outfit at Bowdoin and at Yale. There was the usual variety of ropes, bars, swings, and ladders. Some of the developing machines which I was using were evolved as a result of my experience at Belfast and Bowdoin, and were mostly of the pulley-weight variety, adjustable to the strength of the strong and to the weakness of the weak. Moreover, any set of muscles could be emphasized in the work. The movements of swimming, rowing, and paddling, and the various forms of labor, which men in city life necessarily abandoned, suggested most of the exercises performed with this machine. I adapted the muscular efforts of reaping, mowing, pitching, raking, sawing, chopping, and other kinds of labor familiar to anyone who has ever worked on a farm. By translating these beneficial forms of exercise into terms of a developing machine, I reduced the flexions, extentions, and rotations of the trunk and limbs to their simplest terms.

Before any applicant could use this apparatus, however, a thorough physical examination was prescribed, which involved bodily measurements and a strength test. From the results of this test, we prescribed the applicant's gymnastic work. If he needed special treatment, which I called "medical" treatment, and these men were frequently sent to me by practicing physicians, he exercised by himself according to formula, or took special work with me or one of the assistants. In all such cases, the exercise was watched, from the moment he entered until he left the gymnasium.

If there was nothing unusual revealed by the examination, we put him to work on the developing machine or let him exercise with one of the regular classes. My instructors and assistants generally led the regular classes, although I led them on occasions to satisfy myself as to the progress which they were making.

My days were quite full. Each morning a few business or professional men used to drop in on their way down town, talk over their condition, take their regular prescribed exercises and rub down, and depart. The medical and special classes came at regularly prescribed times during the rest of the morning. Consultations and examinations occupied the early part of the afternoon. We constantly retired our patients as we constantly added to our list. At 3 o'clock the children with their nurses or parents began to arrive. Until 5 o'clock they ruled the gymnasium, dancing, exercising, and playing. For the next hour or two, business men returning from their work, dropped in for an hour's vigorous exercise before dinner. Between 7 and 8 o'clock I held another period of office hours for consultations, and from 8 to 10 o'clock, the gymnasium was open for young men. This group, of a more athletic type than any of the others, contained many of my friends from Bowdoin and Yale. They brought other college men with them and together we went through our old gymnastic stunts. The days varied very little. Tuesday, Thursday and Saturday were the days for the women's classes, and special work with the women.

Friday nights, after the gymnasium had closed at 10 o'clock, I went to bed on the New Haven boat, hoping to reach Yale in time for my lecture Saturday morning. Unless we were held up by a storm, or by ice in the harbor, I usually succeeded. I returned to New York by train on Saturday in time to meet a 5 o'clock class of women.

Day after day, week after week, and month after month, from 8 in the morning until 10 at night I persevered: the pace was wearing. Moreover, both for the pupil and the teacher, the work became monotonous. With no contests,

no exhibitions to work for, the gymnastics lost impetus and interest. They became too much a perfunctory treatment, to be dealt out as medicine to patients. The children held the only contests or exhibitions. I enjoyed their classes as much as they did themselves, and I shall never forget the pleasure of working and playing with them. Most of their parents were wealthy, but living in the heart of New York they could not get to the open country, and in the winter, at least, the ropes, swings, balance boards, and ladders took the place of trees and hay lofts, and the fences of their summer cottages or farms. I stretched my old gymnasium net, that I had used professionally, under the apparatus where they played, so that they might tumble from the bars and swings without injury. Their bright colored frocks, swinging to and fro in the air, their joyous, high-pitched voices, their enjoyment of the play lent a cheer and merriment to the gymnasium, which it could not reach at any other time. The exuberant spirits of the children kept them going, while the daily improvement of the men and women encouraged them to keep on.

Most of my cases that required special treatment resolved themselves into some functional disturbance that could be cured with the proper regulations. Sometimes a complete change in daily work and manner of living were necessary, in accordance with instructions and advice as to diet, bathing, clothing, and sleep. The only hindrance may be summed up in the two words, "if followed." A few unreasonable souls expected me to go through their exercises with them every day. Moreover, with no effort on their part to remove the cause of the ailment, they looked to these exercises to counterbalance all the irregularities and heedlessness of their existence outside the gymnasium, and to effect a miraculous change. They seemed actually to believe that an hour's exercise would cure twenty-three hours during which none of my precepts were regarded in any way. Then, of course, there were the impatient souls, whose improvement was not rapid enough to suit them. But over against these irrationals

and malcontents, were the many who seemed like new men and women when they left the gymnasium. Sometimes the treatment seemed so simple, and the advice so elementary that I felt almost ashamed to take money for it, until I saw the change and development resulting under the tutelage. The faith of the established physicians, in the good that came from carefully directed exercise, was proven by the many patients whom they sent me for special treatment, and even more so, by the many instances in which they sent their own children to play and work in my gymnasium.

Consequently, while I was absolutely certain of the excellent results of my work, and while I did not mind the taunts of some of my young medical friends, I did come to believe that financially I was getting a poor bargain. Instead of renting a small office and charging for advice and prescriptions, which involved the help of Jupiter, and the druggist, I had to rent a large hall, furnish my own medicine in the form of apparatus and equipment, and depend upon the common sense of my patients to effect their cure. Furthermore, human Nature finds it easier to take iron in liquid form with a spoon, than to pull solid blocks of it up and down in wooden boxes. Many of my patients lacked persistence. Some of them could not hold themselves down to their exercises unless I went through them at the same time. I was glad to do this for classes or for groups, but it was humanly impossible for me to follow the exercises of every individual. In consequence, some of these morally inert creatures secured no results from their half-hearted efforts. The regular physician is spared one thing which I had to face constantly, he does not have to take his own medicine. The perpetual pushing, that seems to be required for individual treatment, makes the work irksome to the patient, and of doubtful value. At the same time, it naturally becomes monotonous and boring to the instructor, who, with something valuable to offer, has to push his commodity down the throat of an unwilling victim. Class work is always better; the numbers insure coöperation and spirit. It is exceedingly difficult, however, to form into classes



persons who come for special treatment, every one supremely conscious of his own individuality. •

The individual method insures against over-exertion in the gymnasium if it does nothing else, and this safeguard abolishes the dread of many physicians who otherwise cry down gymnasium work. Moreover the danger is by no means negligible in gymnasiums where heavy apparatus exhausts instead of stimulates a man. Young people, particularly, believe that to get results from physical exercise, they must work to the point where they are ready to drop in their tracks. One young man, who came to me during my winter in New York, was sent by the editor of one the great New York papers. The editor believed that this man's brilliancy was endangered because his physical power did not suffice to sustain his mental activities. When he came to me, he told me that at a certain time every day his brain seemed to stop functioning, and further work was impossible until the next day. I prescribed regular exercise for him, which he took three mornings a week at about 10 o'clock, stopping on his way to work. After a few weeks, he began to show marked improvement, and the editor commented favorably upon the change in his work. About two months later, after the exercises, which he had done faithfully and well, began to grow tedious, he came to me one day and said, "Dr. Sargent, these developing exercises are all very well for a while, but my chief criticism is that you don't give me half enough to do. I go out every morning feeling like a fighting cock." My reply was to ask him if he wished me to send him to his newspaper work feeling like a dead rooster. He saw the point, and without any comment went on with his work through the season. This man, who had a frail physique at that time, is still alive at over seventy years of age, and has just completed a biography of Theodore Roosevelt. This case, of course, is only one of the many that went along a similar course of steady improvement until they reached health.

In spite of the necessary overhead expenses of my institute, I planned to conduct it a second winter, by renting the

hall below my gymnasium for a dressing room. But fate intervened, in the form of the Mallory Brothers, who were looking for a site for a new theatre and began to negotiate for the whole building that I occupied. If I had been prepared at this time to compete with their offer, and take the entire structure myself, I feel sure that the Eno family, who owned the building, would have let me have it; for they favored my enterprise and would have helped me all they could. I could have put a swimming pool in the first floor, and altered the building until I had an ideal setting in which to work out my convictions. But I was not ready to take such a financially perilous step; prospective business seemed good, but not good enough to warrant such a large undertaking.

Just at this time, in June, Mr. Alexander Agassiz of Cambridge called at my gymnasium to look it over, to inspect the apparatus, and to learn something of my methods. He did not tell me that he was an emissary from Harvard, or that he was looking for a director for a prospective gymnasium in Cambridge. I knew, however, that he had seen Blaikie and several other Harvard men in New York, and I hoped that his visit might mean a call for me.

Early in June, Blaikie brought out a book called, "How to Get Strong and How to Stay So." The stir that the book made was nothing short of a sensation. All the youth of the land knew it; its sale was enormous. In this book, Blaikie had extolled my work and abilities with a fervor that would be creditable to a modern press agent. Probably this book had much to do with an invitation which I received to deliver a series of lectures and lessons in Physical Training at the Chautauqua Assembly in August. I spent July preparing this course. In the face of these new developments and possibilities, and in view of the fact that the Mallory Brothers were pressing me for a decision, I decided to give up my lease of the gymnasium. Almost immediately they began work on the new Madison Square Theatre. The janitor and my assistants dismantled my apparatus, and sent it to Belfast to be stored, while I went on to the Chautauqua to start my lecture course.

## CHAPTER XX.

### CHAUTAUQUA.

IN August, 1878, Lewis Miller of Akron, Ohio, and Rev. John H. Vincent of New York started the famous Chautauqua Assemblies which have spread over the entire country, and through which many little villages in remote parts get their only hints of what is going on in other parts of the country. I was going to say that the backwoods towns got their only culture from the summer Chautauqua lectures, but it would be unfair to claim quite so much in view of the farm journals and mail order catalogues that make such excellent reading. The distant parts of this great enlightened country of ours are pitifully remote. Chautauqua is anticipated from the closing of one year's performance to the opening next season. Along with its parades and monkey shines, it brings much of practical value to starving communities. It began as a class for Bible study, conducted on the basis of the old-fashioned camp meeting. The possibilities of making the course more comprehensive than a Sunday School occurred to its founders almost immediately. The next seasons, therefore, they enlarged the curriculum to include science, languages, literature, music, and other liberal and practical subjects.

The Assembly was based upon a theory in which I believed thoroughly: change of occupation, not idleness, is true recreation. A summer vacation may be made a stimulating development for those engaged in the pursuits of life which do not incur studying. In 1879 a new department, called "The Teachers' Retreat," offered interesting instruction in secular subjects. I saw an opening for a summer school of physical education, in summers to come if not that year; for my inspi-

ration came too late to be announced and advertised in the Journal. Consequently I went to the Assembly in 1879 with the hope of arousing enthusiasm and interest in the theory and practice of my work, so that there would be a demand for it the next summer. As usual, I was heart and soul in the scheme.

The location of this early summer school seemed full of possibilities for my plan. Situated about 730 feet above Lake Erie and 1300 feet above the level of the sea, the air has an invigorating freshness, and the beauty of the country gives it all the attributes of an ideal recreative spot, as well as a perfect place for work during the warm months. I saw chances of combining the physical drills of the gymnasium with all kinds of land and water sports, if I had the equipment. This first season I could not of course hope for such ideal equipment, but I looked forward to another year, and built castles on the shores and filled the lake with argosies and galleons in the form of rowboats and canoes.

To return to sober reality, I had to satisfy myself with prosaic exercises that could be adapted to large groups. I brought all my light equipment from New York, and we practised with Indian clubs, dumb-bells, and wooden wands, together with the familiar free-arm movements, until the deadly monotony set in again. Yet it was not so monotonous as a well-ordered gymnasium would have been under similar circumstances. I had elements, human elements to contend with, which offered rather serious problems.

Although Dr. Vincent was very liberal, I did not dare to suggest any dancing steps or even rhythmic movements to relieve the routine of dumb-bells and Indian clubs. The old ancestral prejudices against all forms of dancing were still deep-rooted in many of the good church folk. Their Eleventh Commandment had been for generations: "Thou shalt not dance." And perhaps it was as well that we could not attempt dancing; for we were troubled enough by the curious mob who stood round our gymnasium and gaped at the classes. I used the "Hall of Philosophy," a good floor about 100 by 50



feet, covered with a roof which was supported by a series of columns 20 feet high, and 12 or 15 feet apart.

My classes for men, for women, and for children came at various hours of the day. Everything about the work was heterogeneous, even to the personnel, which shifted at will. I required no regular costume, and insisted only that the clothing should be loose and allow free movement of the trunk and limbs. Since there were no facilities for bathing and changing clothes, I had to keep the exercises down so that my pupils would not reach the perspiring stage. To do this, and still with limited equipment, to keep the work interesting, is an ordeal for the ingenuity of the leader. The cool air from the lake helped greatly in this part of the work, but the necessity for an easy, elementary character to the work came again through the constantly varying attendance. If you have new people every day it is impossible to progress, and if you do not progress, your older pupils will quite rightly find the work dull.

If uncertainty lends charm, my work should have been fascinating. I do not admit that premise, however. One day I would have 20 in a class, the next 60, another day 40. I could never plan for any special work, and be sure of the number of my class. Nor could I be certain whether I would have 50 or 200 spectators. The Assembly was supported by gate receipts, and large excursions came every day to picnic and take in the sights of the performance. It was difficult to accomplish anything when these excursionists, who came with more curiosity than interest in the work, stood around my open-air gymnasium and commented upon the awkwardness of this one or the costume of that one. They distracted the regular students, but they were financially necessary to the undertaking. Ordinarily, under conditions like these, folk dances, simple games, and impromptu stunts attract the attention and hold the interest of the classes. But such almost essential activities were forbidden to me.

Physical activity of that variety, games, dancing, and stunts, is of distinct hygienic value if the director manages

it conscientiously, and arranges it to meet the demands of the whole body. But it must have an aim and purpose, or it will not serve, any more than flitting about from one study to another will take the place of well-organized education. This tendency of fluttering was the greatest objection to the Chautauqua system. It seemed to me that the courses encouraged a physical and mental titivation rather than a progressive firm of education. I could not take one group up to any objective, because before I drew near the point at which I aimed, my group had flown and a new class had come to take its place. The clanging of bells in the morning to call the students to classes, and the grand finale of fireworks in the evening suggested a fire to me rather than a scholarly council. Too much excitement and diversion did not encourage work, and the tension and artificiality of rushing from one thing to another clashed with the beautiful setting of lake and woods, just as the clanging bell was incongruous for a call to studies.

My own lectures particularly jarred upon me. I felt sandwiched in where I did not truly belong, and always the spectre of time leered at me from the back of the auditorium where I held my discourses. The day's program reminded me of the engagements of a popular society woman who crowds gayety upon gayety, leaving one party early only to look in upon the end of another, and who makes out her engagements with the fond expectation of crowding forty-eight hours into one day's work.

My lecture came as a prelude to Joseph Cook's talks. Speaking in a spectacular manner, forcefully and eloquently, on such a subject as temperance, he usually filled the large auditorium which seated 3000 or 4000 people. My own audience ranged between 200 and 400, but before I finished speaking, his audience of 2000 or 3000 had collected. For a half hour before he arrived I amused the auditorium by my performance—I cannot dignify my discourse by the term lecture. It was of course an absurd undertaking to try to hold the attention of a mob of excursionists who had gathered

to hear another speaker, when I had only a didactic subject to offer. However, I took it quite seriously. As I look back upon it now, I can see myself prancing up and down the platform, waving a human bone to emphasize my talk, and shouting to that audience to make them feel that I was offering something new and unheard of—human anatomy. I should have been saying, “Here, ladies and gentlemen, the most wonderful show on earth, something extraordinary”—and so on, in the familiar vein. Yet those large audiences were perfectly respectful and reasonably quiet.

In August, Harvard offered to me the position of Director of the new gymnasium. Naturally I was elated. I told Dr. Vincent and he congratulated me heartily. Shortly afterward, I was leaving the auditorium one day, wiping the honest sweat of hard labor from my brow, when I met Dr. Cook, the great man for whose side show I had been barking. Dr. Vincent stopped me to introduce me to Dr. Cook. Knowing that Cook was a Harvard man, he thought that he was giving me prestige when he mentioned the fact that I had been offered the directorship of the new Harvard gymnasium. “Ah,” Dr. Cook replied, “They had a nigger when I was there.” Therewith the mighty fell. A colored man named Mollineux had been boxing teacher and care-taker of the first Harvard gymnasium, and I had left a colored janitor in charge of the gymnasium at Yale a few months before, had Dr. Cook only known it.

Now, if I remember correctly, I was paid \$100.00 a week for my services at Chautauqua. At first this seemed a princely salary, in fact an extravagant stipend. But I earned every cent of it before the season was over, and I would have been glad to pay a good deal to be rid of the ordeal. Besides my lectures in the Auditorium, I was delegated to give miscellaneous talks on “How to Keep Well,” to any group or society that Dr. Vincent fancied needed or wished such a discourse. At first, when he gave me some warning beforehand, of when and where I was to speak, I enjoyed these harangues, whether my audiences did or not, because I felt that I was getting

somewhere. But before long, I first found my summons and my topic only when I read the program for the day on the morning of the execution. Without a worry, I would pick up the bulletin and discover that at 9 o'clock, Dr. Sargent was going to meet all the ministers and tell them what they ought to do to prepare themselves physically for the clerical profession. Since I have become a hardened veteran, many of my friends tell me that my best efforts are extemporaneous, and I do not dread speaking on the spur of the moment with the deadly fear that used to overwhelm me. However, during my career, I have had to let many excellent dinners go by because I was too nervous with the thought of an approaching speech to think of eating. Today I regret those dinners, and I always feel hearty sympathy for anyone who suffers from stage fright. I have not forgotten Chautauqua. Not only was I missing dinners, but breakfasts and lunches as well. I was not sleeping, I could think of nothing but the possibility of impromptu speeches. I did not mind telling the mothers of the Assembly how to bring up their children to be healthy and strong, once I had launched upon the subject, but I lived in daily dread of the unexpectedness of the summons, and in fear that I should be called upon to speak on an unfamiliar subject. When I did sleep, I dreamed of losing my voice, of having my knees give way under me, of being laughed out of the auditorium by a jeering audience. I had one continued siege of stage fright, which nearly paralyzed me. I lost weight, I was miserable; but I would not give in. I served as a practical subject for my own observation to prove my theories that the state of the body is greatly affected by the state of the mind, especially if fear, anxiety, or worry are present.

Worry is a chronic state of fear; not necessarily fear of personal violence but fear, as in my case, of the unexpected. The lack of self-confidence from which I suffered, was another form of fear; I was constantly apprehensive that I might not have the knowledge to meet one of these unexpected calls. Then I built up my house of cards, one of the favorite



and most formidable pastimes of this worry complex, and I sprang with deftness from one imaginary premise to an impossible conclusion, from which I arrived in another and more wretched state. There is nothing imaginary about the process when you are in its throes. If I should get an unexpected summons, and if I should not be able to talk, it would prove my failure. Then, if Mr. Blaikie heard of this failure, he would think it significant, he would be disappointed in me, he would have to withdraw all his favorable reports of me. I even reached the state when I could see Mr. Blaikie contradicting his previous statements, and fancied him repressing his book wherein he spoke well of me. This all seems absurd now, but it was far from preposterous then.

When the psychology of sport is written, someone will discover the enormous effect of worry and its influence as a determining factor upon the vanquished. Singularly enough, a good illustration of the possible effects of worry and apprehension came up that very summer at Chautauqua. Two famous oarsmen, Harlow and Courtney, were scheduled to race on the lake one day in September. The morning of the race, they found one of the boats sawed in two pieces. The reasonable explanation of such an act is that some one was worrying about the result of the race.

Amidst worry and apprehension, my engagement at Chautauqua finally came to a close, and I left to enjoy a little sleep undisturbed by the thought of an impromptu speech upon anything under the sun for my daily morning exercise. I went almost immediately to Cambridge to make final arrangements about my new position and to inspect the new gymnasium.

In spite of the realization of my earlier ambition, to be the physical director of a large college, I was sorry to leave New York, because I saw there a great field for my work. My dream was to establish another institution, larger and more efficiently arranged, where all kinds of physical treatment could be given. I could see chances of giving gymnastics, mechanotherapy, hydrotherapy, electrotherapy and many

other mechanical treatments to the weak and temporarily incapacitated. Such a scheme would embrace facilities for all kinds of sports, ample dressing and bathing accommodations, a swimming pool, some baths, massage, and all the great comforts that encourage well-being. Many of my friends were greatly interested in the project, but there seemed to be no chance of getting the financial backing necessary for such an undertaking. Since I could promise no financial return to investors, it would have to be philanthropic, or else some club or society with a large membership would have to sponsor it. No philanthropist came into sight, and no such organization existed at that time in New York. When I sold my unexpired lease of the hall on Twenty-fourth Street to the Mallory Brothers for their proposed theatre, I burned my last bridge. Harvard's offer seemed my best chance to progress in my profession.

## CHAPTER XXI.

### CAMBRIDGE.

My first appointment at Harvard, as Director of the Gymnasium and Assistant Professor of Physical Training, began September 1, 1879. The serious opposition of some of the Overseers and a few of the Faculty almost cost me my position; for many seemed to agree with President Porter of Yale that physical training was not a profession worthy of the efforts of an educated man. These disapproving critics guarded the honor of their professions so carefully that I began to think twice before I dared to voice an ordinary opinion. This extreme solicitude on their parts hinged on the awful fear of a connection on my part with that ungentelemanly, uncouth hobgoblin—professional sport. Actually, they held my appointment in abeyance because Mr. Blaikie quoted me in a New York paper as saying that Courtney and Harlow would find rough water at Lake Chautauqua in September, when they were planning to race. This daring comment placed me in an undesirable coterie, which my critics believed to be outside the inner circle of college professors. Forecasting the conditions of a lake in September was allowed in the amateur spirit, but when I voiced my prophecy in regard to an advertised boat race, I gave my good word and name to the sporting world. Any knowledge of this world was barred, in those days, from the curriculum of a college professor.

Moreover, I helped to put myself in the bad graces of the authorities by suggesting a few changes in the plans of the new gymnasium. I did voice a few of my convictions, which were the results of my experience at Bowdoin and Yale, but my opinions were pleasing neither to the architect nor to the donor of the building. And the papers quoted me erro-

neously by over-emphasizing my inadvertent suggestions, and placing me in the light of a malcontent to whom nothing seemed acceptable. They even gave me ideas which I had never held and which I certainly had never voiced. The changes which I did suggest were obvious to anyone who had worked in a gymnasium.

A great deal of the money expended in the Hemenway Gymnasium was used in ornamental construction, which was better from an architectural than from a gymnastic standpoint. The practical deficiencies worried me. Moreover the expenditure of so much money for a mere gymnasium increased the opposition against me. Many members of the Faculty wept to think of the dozens of uses which they could devise for so large an investment. Of course these opinions did not make the prominence lately given to physical training more popular. One gentleman of the opposition said that the best thing the college could do with the new gymnasium after it was completed would be to nail down the windows, lock the doors, and turn the key over to the donor.

A medico-political blunder which I made when I first came to Cambridge did not add to my prestige, nor impress my colleagues with my professional learning. Several of the doctors of Cambridge, whom I had met since my arrival, asked me to join the Massachusetts Medical Society. I imagined that this was an honorary institution like the American Academy of Medicine, and consequently when I went to the meeting, I was quite unprepared for the examination with which I was greeted. Besides, my medical work had not been along the lines of the usual conventional practice, and bound up as I was in my theories of preventive medicine, I could not summon up the information which they required at a moment's notice. Needless to say, in my confusion, I failed to pass the examination. Since then, I have never attempted to take it, and my failure and indifference has roused some prejudice against me in the medical profession. I did not start my work at Cambridge under the happiest auspices.



Since the new building was still under construction in the early fall, I had plenty of time to settle my affairs in New York, and consider the particular problems of Harvard. The old Rogers Gymnasium was much the same as those in which I had worked at Bowdoin and Yale. And I found practically the same men in the Harvard Gymnasium as I had found in the other two colleges. The equipment was almost identical. Those who were strong in the arms and chest used the heavy apparatus which constituted the main part of the equipment, and the men who aspired to the crew monopolized the rowing weights to develop their backs and legs. The baseball cage, such as it was, drew those interested in that particular sport. The attendance, however, was spasmodic, and comprised the athletes whose physical welfare did not of course worry me as much as that of many others in the college. The student body as a whole ignored the existence of the gymnasium. In the intercollegiate exhibitions, Harvard had fallen far below the other colleges.

The growing interest in athletics made adequate facilities imperative. In consequence, the new gymnasium was going to provide special rooms for rowing, boxing, and fencing, while a baseball cage that would be of real service was promised. For my part, I tried to remodel the apparatus and invent devices that would remedy the defects that had arisen at Bowdoin and at Yale. I was determined that the new gymnasium should not attract the rowers and boxers alone, but that it should draw the whole student body, and interest large numbers in physical exercise. To attract the unskilled and undeveloped, I had to substitute all kinds of developing machines for the old-fashioned heavy equipment. Some of these devices I worked out and built while I was in New York, but it took time to design and construct many new pieces. It is not worth while for me to stop here to give detailed accounts of the equipment which I arranged for the Hemenway Gymnasium, for I have frequently described it in my writings.

Outside of the planning of my apparatus, my task in the

new gymnasium, which was almost finished when I went to Cambridge, was simply one of adaptation. In some respects the building was ideal; in others, it was grossly faulty from a gymnast's point of view. Now in matters of construction, the architect and the gymnast are bound to clash. The architect, with one eye ever on the appropriation, fights hard to preserve his artistic traditions; the gymnast, on the other hand, believes that the building should be constructed for him with as little intervention of art as is possible, for which belief he in turn fights hard. Now I am going to carry on a one-sided argument, which may seem unfair since there is no architect to refute me on the opposite page; I am going to criticise the Hemenway Gymnasium but in no spirit of condemnation for the architect. Gymnasium building was a new art in those days; and the builders of the Hemenway worked accordingly with their best knowledge of the subject. But faults which developed complicated the administration of the whole department. By explaining them, I may save someone from repeating the errors, which in every case can easily be remedied.

I had learned in my ten years gymnasium work that the four most important things for a good gymnasium are fresh air, sunlight, good floors, and plenty of wall space. In all of these primary considerations, Hemenway fell short in some respect.

There was plenty of space for fresh air in the large hall, 113 feet long, 90 feet wide, and 30 feet high to the cross-beams. The huge cupola, however, which rose for 75 feet from the floor, provided an air space of about 25 square feet to suck the air out of the big room below and make a direct draft when any windows on the sides were open. This architectural white elephant made it almost impossible to heat and ventilate the room at the same time. Of course by opening the doors and windows it is always possible to get fresh air enough into any building, but with air pouring in promiscuously from the outside, you must expect to get all the dust and dirt and soft coal soot from the street. Such an atmosphere is scarcely the most hygienic for a gymnasium.

But even the dust and dirt is bearable if it lands on a place where it can be removed before it accumulates in pounds. When your walls are literally covered with brick, stone, and wooden ledges and projections, put there for beauty's sake, and when wooden cross-beams, ties and braces checker the upper air, the dirt has a vast opportunity to find a resting place, and thereafter reside beyond human reach, until some day a current of air whiffs by and it descends in clouds upon the people below. Besides the unstrained elements, we added a dirt floor to the baseball cage. It raised such a cyclone, however, that we kept it wet. The result was rheumatic joints and sore throats, and the ultimate result therefrom was a wooden floor, which should have been there in the first place. The concrete floors of the fencing and boxing rooms added to the hazy atmosphere; for they offered up a kind of dust in their disintegration. The atmosphere was nearly as thick as a London fog. I do not need to describe the condition of the mattresses or even of the gymnasium suits after a short time in the dust storm. The winds of Heaven, carrying much of the Cambridge Street Department back to Heaven, in a gray geyser straight up the cupola, someday to be belched forth, volcano-like, into my eyes, is my nightmare of Hemenway.

The matter of sunlight I mentioned among my important considerations. Sunlight is the greatest germicide of all. The way the sunlight is distributed is of almost as great importance as its presence. Some of the worst accidents that have ever occurred in a gymnasium have occurred when an object came between a man's line of vision and the light streaming in from the window. Partly for this reason, and also because the eyes have been accustomed for generations to light from overhead, sky-lights or very high side lights have proved to be the best lighting for a gymnasium. Most modern libraries provide this means of light, and that a gymnasium should be lighted this way is equally essential. Many people thought that the curtains which we put up immediately in the large north and south windows of Hemenway were designed for ornamentation. As a matter of fact, the glare from these

windows made ball-playing, high-jumping, pole-vaulting, and shot-putting almost impossible. As soon as we modified the powerful end lights, the light from the six high dormer windows came into good stead for lighting as well as ventilating. In building the Yale Gymnasium some years later, they avoided the mistake of the end windows and substituted sky-lights, which were ideal for lighting purposes, but in their zeal for overhead lighting, they left out the dormer windows and made no provisions for cross drafts. In consequence, one of the best exercising rooms in the country, from the point of floor space and light, is over-heated in the spring, summer and early fall, and damp and cold from condensation in the winter. Ventilation is of the utmost importance, of course, for otherwise the air under the skylight, as in Professor Royce's description of the atmosphere in the old library reading room, "simply goes up, repents, and comes down again."

The lighting of the baseball cage again showed us the error of our ways. The windows at the west and north ends of the room were about on a level with the eyes. A curious phenomenon arose from this circumstance. The men who had practised all winter in the cage could not hit the ball at all when they went out for spring practice. They had adapted their eyes to the light of the cage which existed only in the Hemenway, and when they tried to focus in the over-head light out-of-doors, they lost their accuracy. They had to start all over again.

In the boxing-room again, the light came into the room at the level of the eyes, and the man facing the light could not see his opponent's face when he happened to come directly in front of the window. In the fencing-room, the light came in higher, and although its volume was inadequate, we arranged the position of the fencers by laying out strips of matting, so that we made the most of what light did come in. The position of the windows in the rowing room would have been good if there had been enough windows to assure us of their position. A few windows on the east side did not provide sufficient light or ventilation for men who were working



hard on the rowing machines. These four special rooms, designed to encourage sports and overwhelm enthusiastic youth by their complete adequacy, proved deficient in the first two essentials, light and ventilation.

The next concern, gymnastically speaking, is the floors. These must not only be of good material and perfectly level, but they must be elastic. Stone, concrete, and cement floors are "dead," and their inelasticity tires the feet, legs and ankles. It is an incidental consideration that no shoes can hope to stand up under them, or rather, over them. The main floor of Hemenway could not be criticised for inelasticity. Made of a poor selection of hard pine, it was so "elastic" that it rose in great slivers under a soap and water treatment. The dirt floor of the baseball cage, I have already mentioned. When we substituted wood for this dirt floor, we also changed the cement floors in the basement to wood.

The actual floor space of the main room was badly broken up, from a gymnastic and athletic point of view, by eleven large brick pillars that supported the roof and parts of the inner side walls. Now these pillars with their brick and brown stone arches added greatly to the architectural beauty of the interior, but they cut down the width of the room from 90 to 45 feet. A grave danger of collisions and accidents arose from their presence. Nowhere was this menace more apparent than on the running track, where the projecting ledges of brick along the sides of the track caught ankles and elbows. The main floor columns were finally utilized, however, when the system of individual gymnasium work was adopted. We surrounded each of them with apparatus, and fenced them off in such a way that the workers on the various sets could not collide. With the apparatus all around them, they served to divide the gymnasium into three separate compartments, that in the center for class work, and those at the ends for stunts and heavy apparatus.

The cross timbers, 30 feet above the floor, intended for the swinging apparatus, seemed to present another difficulty. The height of a beam from which a man may swing with the

necessary vibration bears a ratio to the height which he can reach. Three times 7 feet for women, and three times 8 feet for men is the usual proportion. The beams at Hemenway were so high that no one could get the proper swinging radius. The donor very generously remedied this error by giving us a large iron frame work, set up 23 feet from the floor, to which we attached all our swinging apparatus. Besides giving us this frame work, the donor also contributed very substantially toward our equipment. When we arranged all our apparatus and opened the gymnasium, we had the largest and most varied equipment in the country, if not in the world.

Our last bugbear was the dressing-room facilities. As usual, they were quite inadequate. We had ordinary bowls, set tubs, and a small shower-room, 10 by 12 feet. This shower-room, next to the dressing-room, kept the floors wet as the men walked from their baths to their lockers. There was no intervening drying-room, where they could rub down, and the shower-room was so filled with steam that a bather had to retreat to the locker-room to dry himself. The bath-rooms caused another difficulty. Since there was no proper dressing-room, the men used the bath-rooms to dress in after their tubs, much to the annoyance of those who were waiting outside for their turn. The system was unsatisfactory and caused delay and discontent. No one likes to stand around, perspiring and grimy, while someone else takes his time at a tub, nor does anyone really enjoy a shower when he cannot dry himself beyond the clammy, steaming stage.

I hope that the reader will understand that these criticisms are entered in the hope of preventing others from similar mistakes, and not from any bad spirit. Moreover, it is interesting to know the difficulties of the pioneers as we view the vast improvements and excellent gymnasiums that are springing up everywhere today. But these latter did not happen of themselves; they developed from labor, thought, and the mistakes of others.

## CHAPTER XXII.

### MY FIRST SEASON AT HARVARD.

THE equipment of the Hemenway Gymnasium was completed in December, 1879, and we opened the building to the students in January, 1880, just after the Christmas holidays. Since the attendance was entirely voluntary, my duties at first consisted of arranging the time for various sports, and posting a list of rules and regulations for the use of the apparatus, and for the special rowing-, boxing-, and fencing-rooms, as well as for the locker-rooms and baths. I had special instructors for the boxing- and fencing-rooms, and a supervisor for the bowling alleys, while the captains of the other sports attended to their particular rooms. Owing to the great popularity of the bowling alley, we had to provide a general supervisor and boys to set up the pins and return the balls. I had no assistant in my gymnastic work except the janitor, but since that omnipotent being was also fireman and engineer, I disturbed him as little as possible.

Although the building was open from 8 in the morning until 10 o'clock at night, the men appeared to be free from academic engagements and ready for exercise at three different times, between 11 and 1 in the morning, between 4 and 6 in the afternoon, and between 8 and 10 at night. Now the physical and medical examinations which I had given in New York the winter before had become widely known. I offered this same examination, with individual prescriptions, to the students at Harvard, and it became so popular that I had to employ a clerk to help me keep the statistics. From 10 to 12, from 2 to 4, and from 7 to 8, I examined, consulted and measured Harvard. The applicants for this test made appointments at the janitor's office, and the number, whose interest brought them to me, was exceedingly encouraging.

Such prescriptions of individual exercise, where there is no competition or class enthusiasm to carry men along, call forth those who recognize the value of physical training and who are likely to be appreciative of results.

The examinations were as thorough as we could make them. First, each man filled out a history blank, on which he wrote his age, birth place, nativity of parents, occupation of father, resemblance to parents, natural heritage, general state of health, and a list of all the diseases that he had had during his life. All this information was necessary in order to interpret his condition and decide upon a future course. Following this historical outline, came various strength tests of the muscular force of the different parts of the body as measured by dynamometers, and tests to show the lung capacity. The next step was measurements. Every dimension of the body, apparently significant or insignificant, was given. The heart and lungs were examined carefully before and after exercising to show up defects, if any existed. Finally we made a careful record of the condition of the skin, of the spine, of the muscles, and of any other point which the tape-measure failed to indicate. From this data, we prescribed an order of appropriate exercises, specifying the amount of work and the adjustment of the apparatus used. These directions, written on a card, included, besides a prescription of exercise, suggestions for diet, sleep, bathing, and clothing. None of the cards were printed formulæ, but each one was made out according to the needs of the individual. Of course the prescribed exercises and advice were entirely suggestive, and we made no effort to force the man to carry them out. However, this gentle treatment accomplished exactly what I wished; it awakened a man's interest in himself and in his well-being. Just as boys learn most quickly when their interest is aroused, so the opportunity to help men physically is when they begin to attend to their bodily condition, wishing to remedy its defects, and to pride themselves on the purity of their skin, the firmness of their muscles, and their general carriage.



Whether the young man uses the gymnasium to accomplish these results or whether he chooses to develop himself by running, rowing, playing ball, shovelling snow, or sawing wood is of very little importance, provided that he achieves. The gymnasium, however, offers facilities for building up the body that no other one system can equal. Such was the purpose of its first designers, three thousand years ago. The introduction of the developing machines and the individual system offer advantages to a man who has previously found the feats of heavy gymnastics distasteful or discouraging. He does not have to compete with men whose superiority overawes him; he can compete with his own physical condition from week to week, and from month to month. Nor does he any longer have to worry about strain or injury. If he cannot lift his own weight, the machines can be adapted to the weight which he can lift. Moreover, they can be adjusted to develop the parts of his body that are weakest. He can work for an hour going from one piece of apparatus to another, keeping always within the limit of his strength, and adding slowly to his powers of endurance. Exercise can be prescribed for a man whose heart is weak, whose lung capacity is small, whose liver is sluggish, or whose circulation is feeble. And most especially, the man whose nerves are on edge can be restored to good condition.

At the end of every order of exercise, I prescribed gentle running, unless the man's condition would not allow it. This little spurt is the best conclusion of exercising; for it starts the perspiration, opens the pores, and makes the bath which follows more beneficial. The process of cleansing the skin after exercise, when it is in its most suitable state, is almost as valuable as the exercise itself.

Six months after the examination and prescription the men returned for a second examination, so that I might see what progress they had made, and amend the order and make new suggestions. Such was the system of individual exercise which we started at the Hemenway Gymnasium in 1880.

Athletics at Harvard did not stop with individual develop-

ment. The numbers of men who voluntarily went in for heavy gymnastics and for the various teams made one feel that the gymnasium would never be deserted, and that physical training was gathering enough prestige around itself to command its proper place in the college curriculum. Besides the regular 'varsity crew, four class crews organized themselves, while innumerable baseball nines used the gymnasium daily. The boxing- and fencing-rooms were constantly in demand, and so many men, particularly freshmen, used the bowling alleys, that we had long waiting lists. My following in heavy gymnastics grew to such a number, that I had to teach two hours every day, from 4 to 6 o'clock. The enthusiasm and the skill of the boys called for the usual exhibitions. We worked on the horizontal and parallel bars, flying rings, trapezes, and at high-diving and tumbling. I derived the same pleasure from working with them that I had enjoyed at Yale and Bowdoin with the same class of men. Many of the prominent athletes of the college kept in form during the winter by working in the gymnasium, and these men practised day after day, not to beat one another, but to perfect some particular stunt which they set out to do. They displayed so much talent that we decided to give a series of exhibitions at the end of the winter and to fit up the trophy-room in the front of the gymnasium.

These exhibitions, or meets, were much more varied than athletic meets today. In order to work up enthusiasm, I consented to take part myself in the first of these meets, given about the last of March. I worked with the students on the horizontal bars, high iron ladder, the double trapeze and the flying rings. Then I did a balancing stunt with a rocking chair which I had first performed professionally as a boy of eighteen, twelve years before. Although I had done this stunt at Yale and Bowdoin, and although from a physical point of view, I did not consider it the most difficult thing that I did, it created the greatest sensation at Harvard. This sensation did not arise entirely from the feat; Cambridge was shocked to see a college professor teetering in so

unacademic a position. People did not approve of my appearing publicly as a performer in the work which I was supposed to be teaching. I think perhaps that the ground was well taken, although it did not occur to me in such a light at the time.

The exhibition was so successful, from a financial point of view, that we immediately started a series of three more under the auspices of the Harvard Athletic Association. The first was confined to gymnasium work, the second was a combination of athletics and gymnastics, and the third, to which only men were admitted, consisted of the finals of the earlier events and of the deciding bouts in the middle and light weight sparring and wrestling matches. For years, until the Boston Athletic Association took them over, these meets were the greatest indoor athletic attractions which Harvard offered. A program, which I have saved, may be interesting to athletic enthusiasts of today.

It is not like the documents to which we are now accustomed, printed as it was on bright yellow cardboard, with no mention of the price of the score card or the admission charges.

	Parallel bars.	Vault- ing.	Standing broad jump.	Horizon- tal bars.	Flying rings.	Running high jump.	
Morison .	6	8	7	5½	7	7	40½
Denniston .	5	6	5	6	5	8	35
Bachelder .	7	5	6	6½	8	4	36½
	18	19	18	18	20	19	

The records made at these early athletic meetings would not compare favorably with those made by the highly specialized performers of today, but at these meets one saw more all-round athletes, and a greater variety of stunts at Harvard in the early eighties than one sees now. Particular interest centered in a contest run-off by three men, Bachelder,

# HARVARD ATHLETIC ASSOCIATION.

## EXTRA WINTER MEETING,

Hemenway Gymnasium, Monday Evening, March 27, '82.

### Officers of the Association.

#### PRESIDENT.

EVERT J. WENDELL, '82.

#### VICE-PRESIDENT.

MORTON S. CREHORE, '82.

#### SECRETARY.

HARRY R. WOODWARD, '84.

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GEORGE B. MORISON, '83.

#### STEWARDS.

'82.

H. G. LEAVITT,  
W. G. FELLOWS,

'84.

W. F. WESSELHOEFT,  
W. M. BURR,

'83.

G. E. LOWELL,  
R. D. SEARS,

'85.

C. H. ATKINSON,  
J. E. THAYER.

### Officers of the Meeting.

#### REFEREE.

DR. DUDLEY A. SARGENT.

#### JUDGES.

PROF. WM. E. BYERLY,      MR. WILBUR PARKER.

#### REFEREE OF SPARRING.

MR. JOHN BOYLE O'REILLY.

#### JUDGES OF SPARRING.

MR. EDWARD C. ELLIS,      MR. CLIFFORD BRIGHAM.

John Ford & Son, Printers, Harvard Square.



# EVENTS.

## Running High Jump.

- |                          |                         |
|--------------------------|-------------------------|
| 1. A. C. DENNISTON, '83. | 3. G. B. MORISON, '83.  |
| 2. T. C. BACHELDER, '83. | 4. W. O. EDMANDS, S. S. |
| 5. WALTER SOREN, '83.    |                         |
- Winner, No. \_\_\_\_\_ Height, \_\_\_\_\_ ft. \_\_\_\_\_ in.

## Horizontal Bar.

- |                          |                        |
|--------------------------|------------------------|
| 1. T. C. BACHELDER, '83. | 4. G. B. MORISON, '83. |
| 2. R. P. DABNEY, '82.    | 5. F. B. FAY, '83.     |
| 3. A. C. DENNISTON, '83. | 6. J. R. BISHOP, '82.  |
7. A. H. RIPLEY, L.S.
- Winner, No. \_\_\_\_\_

## Pole Vault.

- |                      |                        |
|----------------------|------------------------|
| 1. H. E. CHASE, '83. | 2. H. F. MANDELL, '84. |
|----------------------|------------------------|
3. C. M. FIELD, '84.
- Winner, No. \_\_\_\_\_

## Flying Rings.

- |                          |                         |
|--------------------------|-------------------------|
| 1. T. C. BACHELDER, '83. | 5. J. R. BISHOP, '82.   |
| 2. R. P. DABNEY, '82.    | 6. A. H. RIPLEY, L.S.   |
| 3. A. C. DENNISTON, '83. | 7. J. B. WALKER, '84.   |
| 4. G. B. MORISON, '83.   | 8. H. R. WOODWARD, '84. |
- Winner, No. \_\_\_\_\_

## Running High Kick.

- |                        |                      |
|------------------------|----------------------|
| 1. WALTER SOREN, '83.  | 3. S. COOLIDGE, '83. |
| 2. W. O. EDMANDS, S.S. | 4. J. W. FOX, '83.   |
5. A. H. RIPLEY, L.S.
- Winner, No. \_\_\_\_\_ Height, \_\_\_\_\_ ft. \_\_\_\_\_ in.

## Rope Climbing.\*

- |                      |                      |
|----------------------|----------------------|
| 1. F. W. KAAAN, '83. | 2. A. R. CRANE, '84. |
|----------------------|----------------------|
- Winner, No. \_\_\_\_\_

## Grotesque Tumbling.

H. K. SWINSCOE, '85; (assisted by MR. LANGDON, of Union College.)

## Middle Weight Sparring. (Final Bout.) †

- |                 |                     |
|-----------------|---------------------|
| 1. J. LEE, '83. | 2. W. H. PAGE, '83. |
|-----------------|---------------------|
- Winner, No. \_\_\_\_\_

## Double Trapeze.

- |                          |                      |
|--------------------------|----------------------|
| 1. T. C. BACHELDER, '83. | 2. C. B. DAVIS, '84. |
|--------------------------|----------------------|

## Exhibition of Fencing.

- |                           |                          |
|---------------------------|--------------------------|
| 1. W. A. HENRY, JR., S.S. | 2. D. LEAVITT, JR., S.S. |
|---------------------------|--------------------------|

## Tumbling.

- |                          |                        |
|--------------------------|------------------------|
| 1. R. P. DABNEY, '82.    | 4. G. B. MORISON, '83. |
| 2. J. W. FOX, '83.       | 5. F. B. FAY, '83.     |
| 3. A. C. DENNISTON, '83. | 6. E. F. WELLS, '82.   |
7. C. M. BELSHAW, '83.

Winner, No. \_\_\_\_\_

## Tug of War. (On Cleats.)

SIX MINUTES LIMIT.

- |  |  |
|--|--|
| 1 { <div style="display: inline-block; vertical-align: middle;">           No. 1. A. F. McARTHUR,<br/>           No. 2. H. E. SMITH,<br/>           No. 3. W. H. MANNING,<br/>           (Anchor.) M. L. BRADFORD, '85.         </div> } '82 | 2 { <div style="display: inline-block; vertical-align: middle;">           No. 1. J. B. WALKER,<br/>           No. 2. W. S. BRYANT,<br/>           No. 3. L. V. LEMOYNE,<br/>           (Anchor.) R. S. CODMAN, '83.         </div> } '84. |
|--|--|

Winner, No. \_\_\_\_\_

\* These two gentlemen having tied at the meeting on March 25th, this contest will be for the cup offered for the event at that meeting.

† This deciding bout in the Middle Weight Sparring was postponed from March 11th, and at its conclusion, or before the end of the meeting the cup for general excellence in sparring will be awarded.

Denniston, and Morison, of the class of 1883, for the highest number of points in six gymnasium events. They ranked among the best athletes of the college and their record may be of interest. The events selected were parallel bars, vaulting, standing broad jump, running high jump, horizontal bars, and flying rings. The competition ran through the three meetings, and the men were graded on a scale of ten.

Professor William E. Byerly and Mr. Wilbur Parker served as judges, while I acted as referee.

Harvard has never seen any keener and more serious competition than developed in the pugilistic efforts at about this time. The art of wrestling had not been developed to anything like its present state, nor to the point which sparring had reached. Under the stimulus of club and class rivalry, it was almost impossible to keep the encounters within bounds. Things went so far that many of the students lured professional fighters to teach and train them, and some even insisted upon taking their masters into the ring with them as seconds and abettors. When I objected to this practice, I was roundly hissed by the spectators. At the time, there was nothing in the rules to prevent this practice, but I was resolved to stop it, and stop it I did. I slowly came to realize that young men, under the intense excitement of antagonistic contests, have to be restrained and hedged around with rules to protect them from themselves, and to save sports from deteriorating into an excuse for legitimately giving expression to bad feeling.

Tug of war was the other sport that the men entered into with zest of doubtful benefit. In the old fashioned tug-of-war, held out of doors, the men dug themselves into the dirt with their heels after the word "go." For the indoor contests, rosin and rubber sneakers were tried, but after a few trials, it was arranged to have the men start from fixed positions on planks bolted to the floor. Wooden cleats on this plank furnished a foothold. Four men were chosen for a team, and the last, the anchor, wore a big steel belt, lined with a padding of felt, and covered with leather. By actual test with a dyna-

mometer, a strong man could stand a strain of over 2000 pounds. Under ordinary circumstances, the three rope men who used their bare hands to grasp the rope, could do themselves little harm because the strength of their grip would usually give way before they could injure themselves. But under the rabid competition, one thing after another was added to make the grip more secure, until leather jackets with leather armlets were adopted. When these jackets were smeared with fir balsam, nothing could pull the rope passed under the arms from the vice-like grip of the arms and hands. The last tug of war of this kind that I saw was in New York, when three of the Princeton teams lay on the floor in a dead faint after the pistol was fired. Although the men suffered no permanent injury, this event put an end to the tug of war as an intercollegiate contest.

We attracted all sorts of people to our meets. A group of Zuni Indians in their native costumes came to one of them. Dr. Cushing was studying their language and customs, and led them by way of diversion and enlightenment to the gymnasium. Strangely enough, the part of the program which excited them most, was the performance of Bachelder and Davis on the double trapeze. The Indians yelled with delight. They looked upon these two performers as spirit men, and treated them with a kind of religious veneration. Of all the enthusiasts in our audiences, they heaped the most flattering applause on our heads. Spiritual was one term which I had never before heard applied to gymnasts. But spiritual the Harvard athletes were in the eyes of these Americans.

## CHAPTER XXIII.

### THE DEVELOPMENT OF GYMNASIUM APPARATUS AND THE CONSEQUENT PROBLEMS.

THE Hygienic Institute in New York had given my developing appliances publicity which resulted in a large demand for similar apparatus of this new style. The fact that Harvard was using my equipment in the new Hemenway Gymnasium, widely advertised all over the country in magazines and newspapers, gave me unwarranted prestige. Moreover, Mr. Blaikie, in his book, "How to Get Strong," "broadcasted" my gymnastic appliances, and heralded the fact that they were unpatented and freely given to any who cared to copy them. Visitors swarmed to see the new Hemenway Gymnasium, some of them curious people, and others interested, being concerned in building and equipping a gymnasium for some institution like Harvard. When any questions came up regarding a piece of apparatus, I always told them they were entirely at liberty to examine it, take the dimensions, and have it made by anyone whom they selected. Almost invariably, they would ask me if I could not have it made for them at my own carpenters, since I had all the original designs and specifications. Otherwise they would have to draw up a new set. Then, early in my career, I found myself carrying on a manufacturing business as a side line. My original contract with the University provided that I should have part time for private work, and in view of this concession, my salary was \$2000 a year.

Previous experience had taught me that good equipment was one of the surest ways to make athletics and gymnastics popular, and that good mental, moral, and physical results depended upon this popularity. Now in order to offer the



most attractive as well as the most beneficial equipment, one must keep intimately in touch with animal mechanics and apply them to the gymnastic machines; for all movements and physical activities may be translated for their therapeutic value into mechanical expressions. Constantly new applications occur to the designer of apparatus.

If our space permitted, it would be exceedingly interesting to trace the evolution of gymnasium equipment from its introduction into this country round 1825 to its present state. Like any other industry, its manufacture shows a gradual adaptation of the means to the end. Every piece of apparatus has been remodelled so that its form fits the body more comfortably, and, in many cases, has been reconstructed so that its material is more durable and practical. Not only have the exercises been facilitated, but their range has been broadened and the chances of accidents have been reduced to a minimum.

The men, who made these important changes in apparatus, have for the most part been experts in the gymnasium, who knew the shortcomings of the equipment from actual experience, and who suggested the changes to men who had the mechanical knowledge to remedy the defects. No one can question the statement that the correct structure of the equipment is quite as important as the correct structure of the gymnasium building. We have spoken of defects in buildings, now we shall speak of corrections made on appliances. For instance, all kinds of horizontal bars are safer since steel rods have been inserted through the centers. Parallel bars have been given a firmer base. The horses and bucks in the gymnasiums have been made more useful and less noisy. The Indian clubs, the vaulting pole, the athletic hammer and shot, all these are different equipment today from their ancestors of a quarter of a century ago. To build a running track calls for an expert who goes at it in a scientific manner, and the men who run on it wear shoes that we have found most desirable after years of trial and experience. Catchers' and fencers' masks have been improved to an extraordinary

degree in recent years. If any reader thinks that these matters are trifling and unimportant, let him remember that this equipment and the quality of this equipment are as important and vital to an athlete or gymnast as an instrument is to a musician. Perfection of detail, from the technical point of view, is what makes an appliance used or ignored by young people who come to the gymnasiums. A ball, a bat, a foil, a racquet must attract the young man and make him wish to try it. Physical training to many is a process of allurements by which a youth is enticed into muscular exertion for the hope of winning recognition in the form of a prize, a record, or a championship. Prestige ever lent itself to the successful athlete.

To lure the prospective gymnast, the work, as I have said over and over, must not be so difficult that he will be discouraged before he has fairly started. There was grave danger of this situation in the old days, when only heavy gymnastics were known. In tracing the history of this branch of equipment, one will find that most of the portable apparatus originated in implements of warfare, used to train soldiers. The shots or stones, the bar bells, the quarter staves or wands, the Indian clubs, the single sticks, the javelins or spears, the bows and arrows, the fencing foils and sabers, all were at one time or another used in warfare. We might even be so meticulous as to cite a wooden horse in the history of the ways and means of war. Certainly scaling ladders, scaling walls, and climbing poles conjure up pictures of cities stormed and battles fought. In the melee of adaptations, the original use of many appliances has disappeared, and people think only of the immediate purpose. The original significance is obliterated by its efficacy as a developing machine.

Ninety per cent of the general population, however, cannot get much benefit or any pleasure from the strenuous, heavy gymnastics. The feats are impossible for them and they shrink from making themselves ridiculous. For this class, free exercises, light gymnastics, plays, games, dancing, and

developing appliances have opened the doors of the gymnasiums. Nor do they need any special building in which to exercise; they can carry on this class of work at home, in school rooms, in fact anywhere. The question in the gymnasium now is, what can the apparatus do for the young man? and not, as it used to be, what can the young man do on the apparatus? But by the introduction of this developing scheme, heavy gymnastics were by no means dropped. Instead of trying immediately to perform difficult stunts, and probably never returning because of the guying which a novice was bound to get, the beginner gets into form with the light apparatus, and later tackles the heavy. By such a process, the gymnasium becomes less terrifying and consequently more attractive.

Moreover, the men, who stood the test of moral and physical hardihood in an initial plunge into heavy gymnastics, had to go through a tortuous stage of blistered hands, bruised limbs, and sprained ankles and wrists, before they attained. The result was that the successful men, who gathered the unsuccessful round them in admiring groups, were the most conceited, egotistical men that ever were created. Good gymnasts they might be (and they usually were), but they were unattractive personally. They did not tolerate or sympathize with the beginner, who had not gone through their severe initiation. They wished every one to suffer as they had suffered; they had no respect for the man whose ankles, wrists, and limbs had not been injured, and whose anatomy did not bear scars of battles won for the great cause of heavy gymnastics. Clever performers these old school gymnasts were, but they never made good teachers; and they were the only source from which instructors could be drawn. For my part, I shall always be glad that I went through their grill of discipline and hard training, but there must be thousands of men whose desires for physical training were ignored and laughed at by these Spartan preceptors. Probably their very hardness led others to the remodeling of apparatus to the use of the amateur.

Certainly the desire to attract as many people as possible, inexperienced as well as expert, led me to reduce my exercises to a form so simple that any child might do them. For instance, since it took thirty minutes to learn all the customary movements with the chest weights, while it required a half hour of daily practice for a year to learn to execute all the exercises with Indian clubs, I chose chest weights for my novices. Moreover the chest weight was also superior as a means of general development, because it could be adapted to the special case at hand. Such apparatus as this supplied the need of a developing method half way between the very light and the very heavy gymnastics.

The introduction of such apparatus at Harvard was followed rapidly through the country, both in the new buildings that were springing up, and in the reconstruction of those that were old. I continued to advertise my unpatented appliances, designed for educational purposes, and more and more people came to me. I invited people to inspect and try the apparatus installed at Harvard, and I tried in a modest way to meet their demands through the facilities offered by carpenter shops, mills, foundries, and factories in Cambridge and Boston. This policy, I believed, worked for the best interest of the University as well as for the cause of physical education. In addition to the invitation to inspect, I was glad to point out any discrepancies which we had discovered in our equipment. I tried to make it as easy as possible for my colleagues, and I extended to them the opportunity to profit by my mistakes and discoveries. For one thing, I learned that the chest weights, the most used appliances in the gymnasium, should be so constructed that the pulleys came at shoulder height, in order that the greatest variety of movements and the best physiological results might be effected. But with such an arrangement the arm-stroke became so short, that the weight boxes continually struck at the top. With forty or fifty of these appliances going at once, the din was deafening. Two remedies were possible: either to bore a hole through the floor and let one



weight have a longer run, as they did in the old-fashioned rowing weights; or to put a pulley on top of the weight box, through which a cord could be passed from the upper pulley, thereby doubling the length of the armstroke.

In perfecting this apparatus, and in filling the demands which came in constantly, I came to realize that I had a commodity of considerable commercial value. Here was a profitable business which might warrant any young man's entire attention. Other people conceived this thought simultaneously. The Boston Gymnasium Supply Company sprang up, and offered to supply my apparatus to all gymnasiums. In their willingness to serve, and in their desire to serve widely, they attached patents to my equipment, so that there might be no infringement upon their control of the trade. Their next step in service was to engage a firm of lawyers, lamentably enough, Harvard men, to try to prevent the college from using my apparatus in Hemenway Gymnasium. The only right which they had to patents was by dint of certain attachments which they made to my unpatented machine, and which were useful enough to control the marketable value of the apparatus, and constitute a virtual patent on the whole machine. The attached pulley on the chest weights was the best example of one of their patents, which controlled the sale of the entire machine. Because I had considered it unprofessional to take out patents on my apparatus, and because I had offered it freely to the public, I was placed in the position of an impostor, who was trying to defraud a man of the returns on his own invention. Fortunately I had used a detachable pulley on an old-fashioned pulley weight machine in the gymnasium at Bowdoin in the fall of 1869. Although the purpose was to lighten the weight, and not to lengthen the stroke, the arrangement was the same. This discovery broke the patent and saved the day for me. I could thereafter use my own appliances. It cost me time and inconvenience, however, to look up the witness to establish the priority of use. After this unpleasant experience I began to look quite seriously into

the matter of patents. Since I had been using the machines for two years, patenting them was out of the question. No firm cared to consider manufacturing them unless they were protected in some way. Consequently several different firms got patents on attachments or improvements and manufacturing began on an extensive scale. None of these firms tried to prevent me from using the machines.

## CHAPTER XXIV.

### THE CONFLICT BETWEEN BUSINESS AND PROFESSION.

IN preparing for my profession of Physical Education, I formed ideals which I resolved to carry out. Nor could I imagine any temptation to depart from these high resolves as long as I followed my chosen career. Yet very early, certain problems arose that led to a conflict between these ideals and certain practicalities that almost made me believe that the stuff of which dreams are made is not compatible with the exigencies of a work-a-day world. I need not repeat my thesis on the importance of apparatus in my profession. This equipment became the thorn in my side that pricked me to the point of desperation, and made me wonder if there was any reason in professional ethics.

I had to have trustworthy appliances, and I meant to have them. I designed the best developing machines that I could, based upon what I had learned from books and experience. Naturally I saw no reason for them to fail because the manufacturing was imperfect. None of them were extremely complicated in design, and only incompetence or dishonesty could make them inadequate. I did not have to fight incompetency.

Not only was faulty apparatus unsatisfactory because it did not fulfil its purpose; it was a menace because it endangered life and limbs. We have already spoken of the psychological effect of technically perfect equipment and the importance which it bears to professional success in attracting people to physical training. With so much depending upon it, I could no more take the chances of hit or miss manufacturing, than a physician could trust an inaccurate druggist to fill

his prescription. I could not deal with materialized lies and expect good results. Yet I had all kinds of fraudulent situations to combat and defeat.

In dealing with the manufacturers, I soon found that the two old antithetical words, worn out by street car advertising and moralizing school ma'ams, defined the difference between the aspirations of the instructor in gymnastics and the average supply house. The latter, feeling the stress of competition and intent upon increasing his output and efficiency, seeks quantity; the former, trying to work out theories for the good of the pupil, demands quality. How to get quality from the company that is most concerned with its profits is a real enigma. The manufacturer does not understand professional pride, and beyond its use as a handy advertising caption, he is not concerned with professional endorsement. Having once secured the latter, he pays no more attention to the inventor or expert. And because the instructor is bound to have apparatus, he finds himself rather in the hands of the manufacturer.

Unfortunately this professional endorsement in the hands of some unscrupulous representatives of the profession may be a salable commodity. Needless to say, it commands no influence in such a case on the quality of the goods. Once sold, it is used as stock in trade. Worse yet, is the professional person who accepts commissions for the equipment which he buys or for which he sends customers. Needless to say, quality does not bother such a man. Sometimes this low form of graft is not confined to the instructor, but extends to the men higher up. I recall an instance where the contract for one of the largest gymnasiums in the country had been given to an unscrupulous contractor, who had promised to the more unscrupulous authorities commissions for the work. The stipend promised for favor was so large that he could not fulfil it and complete the building. This man had the wonderful audacity to go to the donor of the building and demand more money to finish the construction. But the scheme was too apparent, and of course, the head



official who accepted the bribe, and the grafting workman, were both exposed. I do not mention this rotten episode as an example of what reputable men did; I cite it as an example of the influences which reputable men had to fight if they wished to see installed the best materials. Such equipment often did not seem to constitute a good business deal, because the best quality called for larger expenditures, or because the machinations of unscrupulous authorities pushed inferior workmanship into prominence with arguments that convinced the gullible of the adequacy of their product.

Although I know these tales of commissions to be true, I am glad to say that never in the hundreds of institutions which I have been instrumental in equipping, was I ever approached on the matter of a commission for the preference shown me. Moreover, the rather grim humor of this situation was that if I had desired to pay commissions, I should not have been able; for as an inventor, I received no royalties, nor did I hold any patents. As a result, other professional men could receive commissions from the manufacturers, and pay the authorities for the privilege of equipping a gymnasium with apparatus of my design, built of inferior material. By this vicious circle, the inventor was put into competition with himself, to reap praise from friendly institutions and and vicious blame from rivals. Truly I was between the devil and the deep blue sea.

I realized that a decisive move was imperative. If I patented my appliances and went into business, I sounded my own death knell professionally. My medical colleagues and university preceptors would never recognize me as a physical educator and business man at the same time. On the other hand, I was being severely criticised by business men because I did not conform to the standards of their world. No firm would solve my problem for the love of it, with no protection for themselves; for that was contrary to their ethics. They maintained that my reasons for holding out on patents were sentimental. The professional attitude is a curious one to the layman. I came to see that I must

protect the necessary agents of my profession, either by sacrificing my professional standing and producing good equipment for other men to use in the cause, or I must cast myself upon the mercy of some reputable firm, and by giving them the rights to manipulate all my apparatus with or without patents as they saw fit, depend upon them to supply me fairly and conscientiously. I fortified myself with the Narragansett Machine Company of Providence, Rhode Island, and with a Boston mechanic, one Thomas Upham. Not until I found Mr. Upham did I get any reliable dynamometers and spirometers; those I had previously had all been miserably cheap and inaccurate. The arrangements, made after much trial and tribulation, proved successful beyond all my hopes.

Now I should like to say a word or two about the motives which actuated my professional stand. Medical men and teachers connected with our colleges and universities believed that any invention or discovery of a cure for a disease or the invention of an efficacious surgical instrument should not be covered by a patent, but should be left open to the world in general. Such a sentiment is noble and philanthropic without a doubt, but sometimes I think that it is not always wise. If the professional men who object to patents could be assured that the unpatented articles would not be counterfeited and adulterated in the interest of competition, and if the community could be certain that articles with a commercial value not patented by a professional inventor, would not be patented by anyone else, the prevailing sentiment would have a more solid basis and reason for being. But when there is a chance of a person swearing that he is the author of another man's invention, securing a patent, and then putting the true inventor in the position of an infringer, the only protection for the inventor, be he a professional man or a layman, is to police his invention with the law of the United States.

Any college which takes an exaggerated professional stand, and forbids its teachers to patent their inventions, is hardly

encouraging progress in the arts and sciences; for once a man has met with unpleasant and unjust accusations as a result of an invention which he has extended to the world gratuitously, he is not going to tax his creative powers for the sake of an unappreciative and wolf-like public.

Moreover the position of an inventor is more dignified if he is safe-guarded legally and does not have to harangue and argue the validity of his claims. A professional man is not forbidden a copyright; why should he be denied a patent? In either instance the government assures its protection of a material thing, whether it be a book or a chest weight.

Another objection to a professional man's securing a patent seems almost too absurd to mention; but unfortunately, although it is less seldom voiced aloud, it is one which carries vast weight with many foolish people. From the old days of slavery and serfdom, comes an idea that only menials work with their hands. The upper class of society uses only its brain and are consequently professional men. Based upon this absurdity is the prejudice that places surgeons in England socially below physicians, because the former, performing the operations done in the good old days by barbers, stoop to manual labor, while the latter, writing prescriptions upon pieces of paper in mysterious Latin terms, displaying learning and magic, occupy the position of priests and medicine men of primitive tribes. This deep-rooted tradition casts a most menacing shadow over all inventions, to say nothing of the profession of physical training itself. An invention, these people argue, is the product of the hands as well as of the brain. Consequently, if a professional man patents a material article which he has conceived, he immediately places himself in the menial class, among people who do manual labor. With the idea working in such a roundabout way in the case of patents, one can easily realize the intense prejudice which such censors of mankind would hold against a profession which originates in physical exercise. In their snobbish ignorance they hold out against orthopedics and applied gymnastics.

We find these absurd notions at the base of much of the objection which keeps physical exercises out of some of our schools, and keeps them from being part of the regular curriculum in many more. The opponents mouth vague epigrams about developing the body and neglecting the mind. Sometimes the opposition is overpowered or cajoled into acceptance by a taking cognomen for physical training such as "psychophysical culture," a term which implies attention to the mind and soul as well as to the body. In these prejudices we find the medieval concept of the vileness of the body and the sacredness of the mind exemplified. Yet many of the partisans of this scandalous attitude, who have never thought of the mutually beneficial harmony between body and mind, set themselves up as intellectuals.

Another evil which insidiously works its way into physical training by the same portal of scholastic smugness, shows itself in gymnasiums where the theory and not practice is taught. How can theory be applied without physical adroitness? Nor should the instructor stand aloof from the exercises which he prescribes, or the pupils will quite rightfully adopt his attitude. And materially, the man who invents a good school chair does more for his cause than the man who lectures endlessly on how the growing child should sit. Similarly the application of his knowledge of ventilation, dietetics, bathing facilities, lighting and heating in the construction of schools, will do more good than any scientific set of wand exercises or dumb-bell drills that he may work out on paper. These are the material factors which deserve quite as much attention as the theory of the profession; and he who improves the environment does more for mankind than he who issues books and precepts on the secrets of good health.

So we must learn to blend this material side with the professional; the public, academic and business, must tolerate one another. The professional men must acknowledge the importance of equipment in any walk of life and in their attitude toward material attributes they must borrow some



practical common sense from the business folk, while the latter should in many instances adopt some of the ethics of the other world, and temper their occasional sordidness with the high standards of the professions.

In physical education, the equipment of the gymnasium must be scientifically the best; it must be manufactured flawlessly; it must not be misconstrued or cheapened for the sake of business efficiency; it must be attractive, hygienic, and varied. To fulfil these requirements the profession should furnish all the protection humanly possible, whether it be a recognition of the importance of material things, or the encouragement of patents for professional inventions. They must realize that apparatus made of wood and iron is more durable than the hands and brain that invented it, and consequently must be fashioned carefully and guarded adequately to survive. When our schools and colleges give up text-books and apparatus to aid in teaching the sciences, it will be time to talk of dispensing with equipment in the gymnasium in its promotion of physical development.

## CHAPTER XXV.

### THE CALL FOR TEACHERS AND THE ESTABLISHMENT OF THE SARGENT SCHOOL.

THE establishment of the Hemenway Gymnasium at Harvard in 1880 aroused an interest throughout the country in gymnasiums, for colleges and institutions, modeled after this enterprise and equipped with the new system of apparatus and instruction. Harvard's sanction has ever established standards. With the new gymnasiums, came demands for teachers to conduct them and interpret the new appliances; without instructors the institutions found themselves proud possessors of something like a white elephant, nice to exhibit but hardly useful.

In a comparatively short time the demand for physical education knew no bounds; but among the first institutions to call upon me to organize a department of physical culture was the Society for the Collegiate Instruction of Women, then familiarly known as the Harvard Annex, today widely known as Radcliffe College. As a result of their initiative, I opened a gymnasium in 1881 on the corner of Palmer and Brattle Streets in Cambridge. Just as I had been particularly interested in the cases of the women and children in my Hygienic Institute, so the idea of gymnasiums in women's colleges appealed to me strongly. I saw a great field of endeavor with infinite possibilities.

But I could not hope to open gymnasiums, equip them, and manage them after they were in order. A wizard modeled on the lines of an octopus would have found it difficult to carry on such an undertaking. The general interest in the subject was growing with the promulgation of the relation of health to physical training. The demand for the organization and practice of my theories become more

and more insistent. It seemed as if another of my philanthropic endeavors would go wrong; that my great work, in fact, maltreated, like my apparatus, by unsympathetic and ignorant out-siders would be for nothing, unless I could supply people who were trained to teach the new method.

For the Annex, I trained a few instructors, and exercised over them a general supervision at first. Their responsibility was not so great, however, as that which the more distant schools would require of their preceptors. A thorough training was absolutely necessary for the teachers whom I should send to take charge of my system in other cities, and in whose hands the success or failure of it lay. Consequently, to fill this need, I advertised that I would be glad to take a few pupils with no tuition, if they would devote themselves for one year to the study and practice of physical training with the view of becoming teachers. Probably my offer seemed too good to be true; at any rate only a few of the many who inquired were willing to give the time necessary for preparation and training. Most of them were willing to come to me for a dumb-bell drill, a few movements with the Indian clubs, and a list of chest-weight exercises. Then they felt qualified to go out and teach my system. They wanted something concrete, which they could learn between trains and go out to teach to the first available pupil. I actually had one demand for a correspondence course which a girl who desired to be an instructor could pick up on the train between Boston and Bar Harbor. Out of the six women who made up the enrollment of my normal school the first year, only one stayed with me throughout the season, and she was paid to remain as an assistant. The others all obtained positions after one or two months' instruction. To justify them and myself, I have frequently tried to get these premature graduates to return to Cambridge, finish the course, and receive some kind of endorsement. With positions, they did not need further training, they fancied, and I could never induce them to take the time. They had seen the light and imbibed the spirit; what more did they want from me?

Not only pupils of the Annex and straggling prospective teachers came to my gymnasium in Cambridge. So many women and children in no way connected with any institution came for gymnasium work, that a larger building was necessary to accommodate them all. I had no money to build a new gymnasium, nor did my clientele warrant such a financial undertaking. My first concern was to find as nearly central a location as possible at low rent. I managed to get the owners of a large carriage house on the corner of Church and Palmer Streets to build a mansard roof on their edifice, the cost of which was to be paid back in rent. Contrary to appearances and surroundings, I named my new edifice the "Sanatory Gymnasium." Not every one realizes that the word "Sanatory" has a curative connotation as well as its more common implication of good health.

In these new quarters I established a one year normal course for teachers. These few pupils, together with the students from the Annex, and the women and children who came independently, made up the nucleus of the Sargent School for Physical Education. For the first ten years, the purpose of the Sanatory Gymnasium was to provide gymnastic facilities for the Annex. It is a little singular that the gymnasiums first used by Harvard and Radcliffe were private ventures, and that the original buildings were situated within 50 feet of one another on Palmer Street. In the early forties, T. Belcher Kay opened a gymnasium for the use of Harvard students, and in 1881, forty years later, I opened one for the Harvard Annex. Curiously enough the gymnasiums at Oxford and at Cambridge, England, were owned by private individuals before the universities saw fit to establish departments of physical training. Similarly in this country, at Yale, Columbia, University of Pennsylvania and University of Michigan, an individual offered gymnastic opportunities to students before the establishment of the college buildings.

The committee at the Annex paid me \$500 yearly for the use of the building and for instruction, a sum which constituted less than one-fifth of the running expenses. In spite



of its purpose, the normal pupils and the townspeople made it possible for me to keep the gymnasium open for the college girls. The normal pupils paid \$100 for the season of thirty-two weeks and the townspeople paid from \$10 to \$20 for the same period. In this first period of ten years, my normal school grew to include 30 girls.

In 1891, ten years after the opening of the first gymnasium for the Annex, a new epoch began. We lengthened the normal course one year and consequently doubled our attendance. The school grew constantly and monopolized so much of the gymnasium and of the time of the instructors, that it became necessary to give up the outside classes. Moreover, Radcliffe (the Annex now had a name of its own) had been given a gymnasium by Mrs. Augustus Hemenway, the wife of the donor at Harvard, and accordingly had no further need of our establishment. So the Sanatory Gymnasium evolved into a professional training school. In order to have more space, and to be able to illustrate all our theory in practice, I leased the upper floor in the two-story building back of the gymnasium on Palmer Street that I had formerly used as a carpenter shop in which to manufacture and assemble my gymnasium apparatus. This addition gave me two rooms for lectures and practice classes. I clung to my rather unlovely location for the main reason that it was so central. I knew that a successful gymnasium, particularly when making an appeal to students, must be in an accessible place near the college, and within easy walking distance of a transportation center for those outsiders who might interest themselves in gymnasium work. Furthermore, I maintained that the surrounding buildings had little to do with the character of the gymnasium, provided that the building itself had plenty of light and air, and a reasonably good equipment. I agree that a gymnasium built for the use of young women should not be situated in a neighborhood of saloons and gambling rooms, those civilized luxuries sure to be provocative of trouble and displeasure to any one who comes in contact with them, but I know from experience that the proximity

of paint shops, stables, harness makers, upholsterers, blacksmiths, machinists, printers and repair shops do not in any way affect the attendance. Such appendages of higher civilization offer no obstacles to the situation of a gymnasium for men or for women. If the building is to be central, it must be in the midst of the tradespeople; and in every case that I met in the early days of gymnasiums, it had to be in a location where the rents were not prohibitively high. As a result, the founder could not choose the fairest corner in town, but he had to take what he could get conveniently and cheaply. The buildings, therefore, were sure to be old and out of repair, or new and lightly constructed.

My buildings recognized all these early vicissitudes. An amusing incident serves to illustrate their unprepossessing appearance. A lawyer friend sent me a young man whom he was tutoring to enter Harvard. The boy's health was not good, and my friend wished me to develop him physically while he was preparing him mentally for college. Since he was not a student of Harvard, he could not use the Hemenway Gymnasium. I took him to the little building on Palmer Street. After he had been working with me for several months, I sent him a bill for \$10.00. I spoke to him about it when he did not pay me for several weeks. He apologized and said that he had been non-plused at the charge; for although he did not object to paying for the use of the gymnasium, he said that he did not want to buy the building. This young man was the son of one of the richest real estate owners in the country. I enjoyed the joke quite as much as he did, and told him a story that I had once heard about one of his ancestors, who had lost a house in a fire. When the agent called the next morning to tell him of the fire, he found this worthy gentleman on his hands and knees hunting for a dime that had dropped on the floor, and so intent upon his search that the news affected him not at all. The agent repeated his story and expected to hear some concern evinced. The frugal owner turned from his task, still on his hands and knees, and said, "Young man, when a building is lost, that

is the end of it; but when ten cents, that may be recovered, is lost, the man who does not make an attempt to find it is a fool and on his way to the poor house." The trait of frugality had descended to the third and fourth generation. My young friend had a good laugh with me. Later, in his home in New York, he equipped a very fine private gymnasium, better fitted to his needs than my barn-like structure.

When I stop to consider the commodities with which I worked at Bowdoin, and of the rough and tumble equipment at Cambridge, I feel that there is a relation between these makeshift surroundings and the splendid loyalty and comradeship which made for the best atmosphere I have ever known. The democratic spirit which has always possessed the Sargent School found a suitable origin in the eighties and nineties in that queer little building, set about by poverty that did not usually attend a young ladies' school. To the women of Cambridge whose patronage helped to support the enterprise, and to the girls who came to take my normal course, I am indeed grateful. In this crowded neighborhood, it is to the credit of the tradespeople that I never heard a word of complaint from any pupil, and the courtesy always accorded them in this busy district was a by-word. Although I lost much patronage through the inelegance of my buildings, I know that some girls who came to me from wealthy homes profited by the experience of learning what it was to work for a living.

Now I was perfectly aware of the fact that soft-coal smoke, the smells coming from our next door neighbor, the livery stable, and the odor of burning leather, of horses hoofs and of old paint pots from our handy blacksmith shop were not the most pleasant aromas in the world; nor did the noises rising from the machinists' files, carpenter's saw and smithy's hammer form the most dulcet accompaniment to my lectures. But all these incidentals of trade had a significant bearing upon the work at hand. These young people were learning that all kinds of manual labor and various physical activities had been not only the foundation of the wealth of the republic,

but also of the health and development of the majority of our people. Modern civilization with its inventions and new machinery was changing all these old body-building occupations, and the intricate division of labor forced men to devote all their energy to their occupation, and to trust to other haphazard means of preserving their health and developing new vital power with which to carry on their work. The most important lesson that I was teaching was the possibility of furnishing means not haphazard, but scientific and effective.

In order to prove the value of the primitive forms of labor, I worked out some fifty or sixty free-developing exercises in imitation of the great muscular movements involved in various forms of labor and athletics. I imitated such activities as wood-chopping, mowing, hammering, fencing, rowing, and shot-putting. These exercises are used widely now all over the country, for school children like to mimic the labor of grown men, and school boys and girls always respond to the athletics which interest their older brothers and sisters. Sometimes these schemes get the name of mimetic exercises, and sometimes they are called athletic-free exercises.

To illustrate further the effect of shop, factory, and industrial work upon the health and physique of young women, we established at the Sargent School a working girls' clinic, two evenings a week. Each girl joining the clinic, or "club," as we usually called it, had a physical examination, from the results of which we prescribed exercises that would best remedy the defects we found. The interest and significance which these girls attached to the corrective exercises and setting-up drills taught our girls a wonderful lesson. Always ready to play or dance, these working girls insisted upon their setting-up drills first, and I never had pupils more faithful in following up the exercises prescribed than were they. The normal students had found in their practice work in the schools some difficulty in interesting the children in certain plays and games, as well as in special developing drills, because after a few minutes effort these exercises became monotonous. They had to make constant innovations and



work hard to hold the attention of the class. But here were working girls, who spent day after day on the same work, sometimes in cramped positions with no muscular relief, welcoming dumb-bell drills as real recreation. The teachers saw the eagerness with which these girls who needed and appreciated the work seized upon the opportunity offered them. It made them realize the value of their commodity, and it showed those, whom the school children's indifference had discouraged, that so immature a verdict was in no way an indicator of the enthusiasm which physical training could arouse.

In our improvised gymnasium, we struggled along with the fervor of youth. We worked out new plays and games that today are old stories. The line game of basket ball, which has proved so popular for girls' schools and colleges originated in our carriage house. The same is true of the gymnastic adaptation of the Gilbert system of aesthetic dancing. We put most of the new sanitary and hygienic fads in regard to heating, lighting, bathing, and ventilation to a severe test, negatively, and we found that we could get along without them. Our visiting friends from rival schools frequently brought other friends to inspect our conveniences; they saw nothing, for we had none to show. We huddled around our heating plant, a big coal stove on one side of the room, for lectures, and avoided it, as far as it was possible, for our practice. High side windows and a few leaky sky-lights furnished our light. And our ventilation system was the simplest of all our simple equipment. Whether we wanted air or not, we got it through the cracks in the floor from the cold carriage store room below; when we wanted more air we threw open a big sliding door at the south end of the room, and in a few moments the room was filled with fresh air and sunlight.

Another curious characteristic of this room was the abandoned enthusiasm with which it took part in our games and dances. It rocked in perfect rhythm with the dances, and swayed as we played our games, and vibrated joyously to

our drills. Parents and visitors often viewed our teetering floor with dismay and apprehension, but it was a great aid to our dancers and gymnastic performers. Since the frame work of the building was held together with iron rods, there was practically no danger of the floor giving way, and the value of elasticity in a floor used for dancing, jumping, running, and general gymnastics, which I had learned in my experiments with running tracks and stages, was proved beyond a doubt to the pupils. The deadening effect of a solid floor shows in strained muscles and lameness.

I found that I could use my carriage-house gymnasium for a laboratory and conduct experiments that could not be carried out at Harvard because of the resultant publicity and the curious on-lookers. For one thing we tested the swiftness of a blow in boxing: Dr. Fitz, instructor in physiology, worked out the problem with John L. Sullivan to demonstrate for him.

The greatest source of danger in our rickety gymnasium lay in the danger of fire. The front and back stairs which could serve as fire escapes were only 3 feet wide, "hen runs" the girls called them. Any girl in the school, however, could descend to the ground on a rope from the large door on the south side of the gymnasium; many of them could come down two or three different ways. And although we often discussed the possibilities of fire, it remained for a plumber to upset a lighted candle, while he was working on the pipes over the shower-room, to give us an opportunity to test our theories. The dressing-rooms caught like tinder, and the fire spread rapidly through the upper part of the building, but the firemen confined it to the rooms and gymnasium floor. Very fortunately the building caught before 9 o'clock in the morning when the school assembled. A high bit of melodrama came from the burning building, when a fireman named Colby, who had done the trucking of my apparatus, and who was familiar with all parts of the gymnasium, emerged from the flames and smoke to clamber down the ladder with a human skeleton in his arms, which he had rescued from the

closet in the lecture room. Colby, weighing 300 pounds at least, descending from the second story with a bunch of bones over his shoulder is a picture which I shall never forget. Brother Bones, at least, was saved.

Beside a pecuniary loss of about \$2000, some valuable records, which I could never replace, were burned. My insurance was on the lockers and equipment, but since the lockers were used to support a mezzanine floor which I had constructed to make more room, the insurance company decided that they were part of the construction of the building and disputed my claim. It is a notable fact that the adjustor of an insurance company is never the one who solicits the business. I got no satisfaction for the lockers.

The inconvenience which the fire caused was lessened by the kindness of our neighbors. In less than two days, the school was established and running in the Balmer Building across the street. The old gymnasium was quickly repaired, the equipment replenished, and the new locker rooms refurnished with lockers from the college, which Mr. Hemenway generously had given to me when he was enlarging and making some changes in the gymnasium at Harvard. In the same carriage-shop gymnasium, down among the carpenter shops, machinists, blacksmiths, and store houses of old Cambridge, we carried on the Sargent School for several years longer, turning out teachers who were finding positions all over the country. I never have regretted those make-shift years on Church Street, nor have I ever forgotten the valuable experience which they gave me.

## CHAPTER XXVI.

### THE HARVARD SUMMER SCHOOL OF PHYSICAL EDUCATION—SUMMER OF 1887.

THE general awakening of an interest in physical education throughout the country called first for teachers, and later, for further instruction for the teachers already in the work. With their growing knowledge of the importance of the subject, derived from their practical experience, they wished to learn more of the theory. Some of these summer school pupils directed college gymnasiums, some taught in the grades and had had no previous training in physical education, some saw a chance to take up a new occupation which they recognized as an important factor upon the horizon, and a few desired the training for their own health and physical development. The uninitiated from all walks of life took up the cry, originating in a demand from teachers in the profession, and added the vigor of their persuasion. Those who were already teaching, and many of those who welcomed the training as a means of becoming teachers, could not give up a whole year going to school. Vacation was the logical alternative. In July, 1887, the summer courses in Physical Training were established at Harvard, but not on the same footing with the other courses of the Summer School, for the old wrangle of academic and non-academic subjects still raged in certain quarters.

The Corporation, consequently, declined to take any responsibility for carrying on a course in Physical Training, further than to grant the use of the Hemenway Gymnasium. All the advertising, organization, and administration was placed in the hands of the Director, exactly as if it were a private venture. I became therefore responsible for the



mental, moral, and physical welfare of the summer school as well as for the financial outcome.

The college authorities, nameless potentates who in this anonymous capacity sway the collegiate world, worried greatly. First, the use of the college building and the granting of certificates at the end of the course gave quasi-recognition to that bugbear, that spectre, that goblin, the non-academic subject. Secondly, they shook their heads dubiously at the coëducational freedom, necessary in the practice of gymnastics and athletics. And in the third place, the more conservative, and most of them were more rather than less conservative, did not approve of the scandalously abbreviated costumes which physical exercises required for safety and comfort. Harvard was headed toward perilous rocks, if not toward destruction, and physical training would be its ruination. Radcliffe, in abounding zeal, discouraged its pupils from entering, and the *Boston Medical and Surgical Journal*, in its righteous sobriety, accused the college of starting a money-making proposition, that could offer nothing advantageous academically. In an editorial it denounced Harvard for opening the Summer School for Physical Education with a financial glitter in its eye, rather than with the gleam of "that truth that made us free."

Notwithstanding the ill omens with which the new department of the Summer School was launched, it proved such a success that the directors of the other courses began to fear that the unenlightened tail might wag the noble dog. To prevent such a heterodox occurrence, physical education was taken into the family circle in order that the powers might regulate it. At the outset, the fight, which lasted for twenty years, generally simmering below the surface, seldom actually coming out, but always dangerous to the existence of the Summer School, established its opponents and proponents. Since the finances of the Summer School proved quite satisfactory, I was relieved of any personal responsibility, and the Bursar received orders to collect the tuition as he did for the other courses. Moreover, I was to receive

a salary for conducting the school, instead of getting the surplus above expenses as I had the first year. Up to the limit of the appropriation made for the department, the Corporation also took over the responsibility of paying the instructors and assistants and arranging the expense budget. With this arrangement, for which I was very thankful because I was relieved of a concern that interrupted my work, I set out to build up the school and to meet the growing demand for teachers by sending out my Summer School pupils.

The variety of people whom the Department of Physical Education attracted to the Harvard Summer School, filled the directors with wonder and admiration. Never had they imagined that the subject commanded the attention of people of such importance or of so many walks of life. Many a man who had looked upon the profession as a hobby of cranks and half-educated folk, silently changed his estimate. We had officers of the army and navy, we had school superintendents, college professors, principals of public and private schools, lawyers, physicians, and members of foreign embassies, as well as the school teachers, athletes, and gymnasts whom we expected. One man, whose business acumen amused me if it did not fill me with admiration, wrote to the Summer School enclosing a circular which advertised a course in physical training to be given by him in the autumn and pronounced him a graduate of the Harvard Summer School of Physical Training. Since he had not attended the school, I was a little mystified, until I read his explanation. He was sending out these notices, and if he received enough answers to warrant the undertaking, he intended to take the course and prepare himself to teach the subject advertised. An instance of putting the cart before the horse, but an effective means of assuring business success, every one must admit. Every age above eighteen years, every size, every degree of intelligence was represented.

The work of the school in its early years consisted of two courses, one in theory and one in practice. The theory con-

sisted of lectures in elementary anatomy, physiology and hygiene, anthropometry, applied anatomy, and general lectures on the history and philosophy of systems of physical education. In the practice course, we took up class drills in calisthenics, free exercises, tumbling and dancing steps; and we worked with dumb-bells, wooden wands, Indian clubs, bars, vaulting horses and rings. At first, the sessions, lasting only half the day, began at 9 and ended, after two hours of lectures, at 1 o'clock. The pupils who attended the course out of curiosity found this a most agreeable arrangement; for in the afternoons they could go to the beaches, take excursions round Boston, or amuse themselves as their fancy listed. The advantage of this half day arrangement was that a pupil might try it out with a view to adopting it as a profession, and still spend comparatively little time and money. Eager as we were to get teachers and supporters, we did not desire half-hearted exponents, nor did we wish to inveigle anyone into the work. We felt no compunction in taking what time we did from the pupils, even if they did not continue, for the work invariably improved their health, and served as a vacation profitably spent. On the other hand, the half-day session made the management responsible for a great many pupils during a large part of the day, and in the case of some of them, whose minds did not take a serious turn, the undertaking was not to be laughed away. The gymnasium work did not require so much time for study as the other courses, and after two years' experience, the authorities decided that seven afternoons every week for five weeks, with not a great deal to claim the attention in the evenings, represented too much spare time for the pupils. The session was extended to ten hours: from 8 in the morning until 6 o'clock at night. Of course this change did not mean that any one had ten hours straight work, but the program was scattered through the day, so that it was difficult to take the full course by doing a morning's work every day and playing the rest of the day. But the change to an almost continuous performance presented certain new difficulties. These

teachers who came to Cambridge, forfeiting their summer vacations for the sake of acquiring more to give to their pupils, felt that the strain on their good intentions was a bit severe. They wanted recreation from the rather strenuous physical and mental work which they followed all day. Moreover the teachers desired particularly to meet other teachers engaged in their own line of work. In those days, since amusement was not so accessible as in these times of movies at ever corner, the more resourceful students organized a series of five or six entertainments in which the talented displayed their wares. After the singing, solo dancing, or recitations, they spent the rest of the evening meeting one another and dancing. The Physical Training Department conducted these parties for several years, supporting them, chaperoning the dances, and inviting the members of the other courses to attend. The Summer School authorities finally decided to take over the management of the social affairs and not cast a too popular burden upon the black sheep of the departments.

The Department, in spite of its amalgamation, retained its individuality and ill-repute by its very nature. Whereas a student was seldom allowed to take more than one academic subject at Summer School, so that he might devote himself intensively to the study for the six weeks, the student in the Physical Training School was encouraged to spread his efforts over a half dozen different subjects in theory and practice, and at first he was held responsible only for his regular attendance at the lectures and practical exercises at the school. There were no examinations required for entrance, and none at the end, since no certificates were given for proficiency or teaching ability. This early policy resulted from the fact that the object of the school was to arouse an interest in the general subject, show its relation to education, and in a short time prepare as many people as possible to teach physical training. We tried to open the door, show the extent and richness of the field, and point out the opportunities by suggestions and demonstrations for the brighter minds to



grasp. The proportion that did not respond to the call was what might have been expected. We offered so much material for digestion that beginners were often swamped and found it difficult to keep up with the course. Many returned to repeat the work a second year, in order to absorb what they had missed, and others, who had had experience and found no difficulty in grasping the whole course, came back a second year for advanced work. When we found that the students emerged with such different stamps of the course upon them, we felt that in justification to ourselves as well as to them, we must devise a scheme to differentiate between those who were advanced in the work and the beginners. Consequently, we issued a certificate, and at the same time extended the full course from which we graduated our pupils to four years, with examinations in both theory and practice. We doubled the time given to the elementary courses in histology, anatomy, physiology, and anthropometry, and added for the third and fourth years psychology, relations of mind and body, physiology of exercise, principles of education, physical diagnosis, preventive medicine, and others. We extended the work in practice to include boxing, wrestling, dancing, all kinds of athletic sports, and advanced gymnastics, as well as a great variety of playground activities and games. In the final program four hours a day were devoted to lectures and demonstrations, and four hours to physical exercise. Nor did we treat, or try to treat the theoretical subjects exhaustively, or insist upon military precision, finish, and exactness in the execution of physical exercises. As soon as the pupils understood the movements, we went on and tried to prepare them by giving them information on new work which they could put into practice and perfect when they had more time in the winter months.

The course had now become so broad and comprehensive that four summer terms covered it only superficially. The entire success of the work depended upon the enthusiasm which the course aroused in the men and women who took it, and the application with which they put into effect what they

had learned during the summer. The results gratified me beyond all hopes. I think that I do not exaggerate when I say that this course at the Harvard Summer School had a paramount influence on physical education in this country. It grew with incredible speed. From a beginning of 50 pupils and some dozen instructors and student assistants, it has increased steadily in size until, before the War, we had 230 pupils, and 48 lecturers, instructors, and assistants. From 1887 to 1918, the total registration at the Summer School was 4269. Of this number there were 3052 individuals, many of whom registered several different years. The School represents 1082 institutions, of which 53 are in foreign countries; it includes 232 colleges, 245 secondary schools, 65 normal schools, and 326 public schools, 11 normal schools of physical education, 72 Y. M. C. A. gymnasiums, 51 Y. W. C. A. gymnasiums, 19 municipal gymnasiums, 30 athletic clubs, 27 state institutions, and 4 vocal training schools. Every state in the Union is represented. No course do I know of more democratic, more broadening, or more heterogeneous in the character, experiences, and ambitions of its personnel.

## CHAPTER XXVII.

### LESSON FROM THE HARVARD SUMMER SCHOOL.

THOUSANDS of visitors, who pass through Boston during the summer months, stop to go through the Harvard grounds and buildings which are kept open to the public. Because Boston is a terminus for all the trains coming from Maine, New Hampshire, and Vermont, and because it is a place of great historic interest, it attracts these hordes of vacationers who stop to see the Old State House and the old churches, and who seldom fail to journey to its adjoining suburbs. Cambridge naturally is first in order, just across the river; and in Cambridge, Harvard is the first stopping place. Now many of these tourists are simply picture postcard senders, who take snapshots of little brother under the Washington Elm, but many visitors come to Cambridge for a more serious purpose than that of treading the paths that once were trod by Longfellow, Lowell, Channing, and Holmes. Many come to inspect and observe the educational facilities and methods employed by our oldest university. They study the libraries, museums, laboratories, and lecture halls, the gymnasiums, boat-houses, and athletic grounds, with an eye to improving some of their own, or to getting information on points of construction which they may impart with certainty and authority when they return to their homes, by virtue of which enlightenment, they become dogmatic in their estimates of proposed educational schemes. Have they not been to Harvard?

If these serious-minded sight-seers derive benefit from mere inspection, how much more would they derive from actually attending the college classes, and learning something of what Harvard offers, as well as the mode of offering it. This is

precisely what summer school courses do; they give people who are unable to attend the regular college course at Harvard a chance to study educational ways and means, and to take up any subject toward which they lean as a specialty. The large numbers that have responded to this opportunity prove the value which is placed upon it. Men and women, interested only incidentally in the historical aspect of their surroundings, come to absorb as much of Harvard as they can in six weeks and carry it away as stock in trade, to command respect and better salaries. After a summer at college, they can compete with the teachers who have had more preparatory training. If advertising is of any use, Harvard should profit by the fact that these men and women to whom she extends these courtesies in the summer become her finest and most enthusiastic supporters. They carol its praises to the skies, and encourage their young friends to go there to college. I remember one New England woman teacher who went west to teach after a course at the Summer School, and sent three boys, who were her pupils, to Cambridge. Of these three, two became first marshals of their classes, and the third was class president. Through these summer courses, Harvard is doing inestimable good to the community, and reaping full reward for her efforts.

Although the undergraduates at Harvard come from all over the country, their local peculiarities become absorbed in the maelstrom of college life. General standards regulate all the students, so that, while the latter preserve differentiations that assign them to various sections of the country, they do not cling to their own habits nor try to combat the order of things at Cambridge. They come young and adaptable, with four years ahead of them. But the Summer School students, who come here for a stop of six weeks only, spend a good deal of time arguing for and exemplifying their home customs. They do not have time to become acclimated, nor do they approach Harvard with the deferential attitude of the regular freshman. In many instances, when Cambridge did not understand them, they understood Cambridge far less.



At one of the formal receptions given at the Hemenway Gymnasium to the Summer School students and to the members of the National Education Association that was holding its meetings in Boston that year, I saw some of the most non-plused young people that I have ever had the privilege of viewing. The receiving line, ranged along one end of the hall, ensconced upon a gorgeous rich rug, radiated icy splendor through the entire room. They had the effect of a refrigerating plant. The ushers pounced upon unsuspecting guests, escorted them to the formidable line, and pronounced the culprit's name. With amazing precision the fine ladies ducked simultaneously in a curtsy. At a distance of 15 feet or more, the guest twisted his hands, tried to say something, thought of curtseying in return, decided against it, stumbled on the edge of the rug, and plunged to safety in a group who had just been through the same ordeal and with glee stood watching the uninitiated approach. Except for the absurd formality, there was no entertainment of any kind. I do not recall the food, but if there was any, it most certainly must have been water ice. I heard one group in bated breath asking the names of the gracious automatic hostesses, and they referred to them as the lady with the double pearl necklace and the lady with the coronet. Unfortunately this affair was no exception to the rule; such stiff formality governed many of the early so-called parties. As I stood watching some of them, I did not wonder at the reputation which Harvard had earned for being cold and indifferent. True as it is that most New Englanders are fundamentally kind and warm-hearted, no one can be expected to accept such hearsay in the face of their outer frigidity. Since those days, we have "broken the ice" by introducing social dancing at the receptions.

New England in turn was mystified by the attitude of the girls from the south, and also suffered a few shocks in this clash of localities. These southerners, effusive, sincere, natural, and perhaps gushing, simply could not think of letting any men see them in the unmaidenly costume of

bloomers in the gymnasium. There was much talk of modesty, which the authorities countenanced, and the blushing damsels wore skirts until they discovered that, from the very nature of the physical exercises which they were expected to do, they were more conspicuous in skirts than in bloomers. These same girls, however, brought the authorities down upon their heads, because they could not understand why there was any objection to their spreading a table cloth on the lawn in front of the gymnasium and serving luncheons or teas for their friends. The publicity of the spot seemed no reasonable obstacle to their festivities. They could not adapt themselves to the northern traditions of worshipping the inconspicuous, a negative fervor, they maintained.

We had sects as well as sections to consider in our special dispensations. One summer a large number of ardent Christian Association followers came to take the course in physical education. The lectures at school struck them as materialistic, and necessitated a spiritual antidote. We secured the rooms of the College Christian Association for their prayer meetings which were to offset the sordid earthiness of our instruction. These enthusiasts, not content with several hours in the college buildings, continued their religious demonstrations and testimonies in other meeting places until late into the night. The old saying, that it isn't what you do but how you do it, brought the same overworked authorities down upon their heads, and the sacred recreation was curtailed for the sake of school discipline.

I shall never forget the Cuban delegation that caused another stir worthy of notice at Summer School. In 1900, Harvard opened its gates to welcome some 1500 Cubans, men and women, who came to this country to learn American methods of education. We welcomed our share of them in the practice course in physical training, and we met many more when, one evening each week, we opened the gymnasium to them all. Besides having an excellent opportunity to observe their social customs and habits at the social gatherings, we gathered together valuable statistics on the physique

of the Cuban race from the measurements that we took of over 1000 of them. In comparison with the other members of the Summer School, the records showed them much smaller and lighter and in poorer physical condition. The Cuban women, however, compared more favorably with the Cuban men in the matter of physique than did the northern women with the northern men. The Cubans attributed the fact, that the women ate more per capita than the men, to the men's excessive smoking, and to a possible epicurean habit of going about to restaurants to find dainties that especially appealed to them. Whether this restaurant habit developed a connoisseur's discrimination in the matter of ordinary food, and consequently cut down their regular consumption, or whether it drained their purses and necessitated a fastidious appetite, I do not know. But so statistics pointed.

The United States Government had invited these Cubans to visit our country, and for the excursion, which was designed to enlighten Cuba, each member was paid a salary. As soon as they received their first installment from the Government, they invested it, to a man as well as to a woman, in American clothes and American shoes. Their feet were so small that they found great difficulty in getting shoes to fit them. The shoe dealers, aware of the peculiar demand, and unscrupulous in the matter of Cubans, unloaded all their old fashioned, narrow toed, pointed shoes upon these unsuspecting foreigners. The men in many instances had to resort to women's sizes if they were to get shoes small enough. A few days after the financial windfall, the Cuban delegation, wonderfully and awfully shod, were escorted round the historic spots of interest in Cambridge and Boston. The women's clubs instigated this tour, and a group of society girls acted as guides. Before they were under way, groans and sighs rose on the breezes from the walking delegation. To undertake the journey in American shoes was out of the question for the majority. The American girls had a little moral lesson set before them, bearing out the haranguing they were getting constantly on that very subject. With considerable pride in their own

common sense, they proceeded to walk the crippled school teachers off their feet.

Although these poor benighted Cubans, as we chose to regard them, had broken away from the political bondage of their Spanish over-lords, they still clung to the social distinctions and the hereditary traditions that were not their own but were borrowed from Spain. According to Spanish decree, only the well bred and highly born had small hands and feet; the smaller they were, the higher and more noble the man. Large hands and feet, results of manual labor, were the badge of slavery, or a sign that a man had worked for his living. To the lazy Spaniard, there was little choice between slavery and labor; the terms were even interchangeable. Such a deformity as feet large enough to walk comfortably, and hands that could earn a living were the horror of the Spaniard. To require such abnormalities, as our immigrant examiners do today, would have been by their standards incomprehensible. Among these Cubans we found prejudices and convictions redolent of the Dark Ages, mythical lore found only in fairy books and ancient geographies.

But Cuban delegations and religious groups did not monopolize the list of notable visitors at Summer School. One year, Dr. Mosso of Turin, one of the foremost physiologists of the world, came to Harvard. His guides hurried him through the gymnasium one morning on the way to see the glass flowers at the museum, a greater attraction of course than the pupils of physical training. In the afternoon, however, Dr. Mosso returned *alone* to the gymnasium and spent an hour or more talking over the methods of our work, which he later reported very favorably to his government. Another time, Helmholtz, the renowned German chemist, showed great interest in our gymnastic work. He came to the gymnasium with his wife and daughter. This family manifested a group characteristic which amused me. Among the appliances of the gymnasium, Professor Helmholtz came upon a 200 pound dumb-bell which he leaned over to pick up with



one hand. Because the handle was so large, he found difficulty in grasping it with one hand firmly enough to lift the weight. When he had succeeded in doing it both his wife and daughter had to take off their gloves and try this feat which had taken the full strength of their lord and master. In spite of their failure, they at least had had the satisfaction of the attempt and of the proof of his superiority.

A visitor of a different type, named Mary Maclain, came from the western plains to look over the east. This eccentric young person with six of her fellow country women gazed for a little while at the girls in their bloomers, performing on the different apparatus, and exclaimed, "Well, this is a hell of a joint." Whereupon she turned on her heel and left the building by the nearest door.

Whether it was occasioned by the comments of visitors or by the usual course of criticism and fault finding, a constant stir seemed to pervade the Department of Physical Training. There was a great deal of talk in regard to the advisability of carrying on the violent exercise of the Physical Training Courses in the hot summer weather. There was much talk of heat prostration. These matters reminded me of a very sad incident that occurred one hot summer night at a dance given by the Summer School. A man of about fifty, who had retired from business, and who happened to be taking a course in French at the Summer School, was dancing with one of the young women of the school, when suddenly he fell to the floor unconscious. Two or three physicians who were present hurried to his assistance. They laid him on a bench, unbuttoned his collar and shirt and threw cold water in his face; for his neck and face were very red and congested. In a few minutes, he became conscious and apparently quite well. He stood up and apologized to every one for making so much trouble. He assured them that he was all right, and that they could go on with their dancing. I was the only one who stayed in the room with him while he was adjusting his shirt and collar. I asked him if he had had any such falls before, or if he felt any symptoms before

he fell. "No," he replied, "I have always been perfectly well, and I had no premonition of anything happening. All that I remember is that I was dancing with the prettiest girl in the hall, and having the happiest time of my life—and then I woke up in here." As soon as he had fixed his tie, he started back to the dance hall. I stopped him. "I should not attempt to dance any more tonight if I were you," I told him. "Sit down here beside me for a few minutes and we will walk out together." He sat down and almost immediately fell over into my arms, dead. His heart and lungs had stopped functioning in consequence of an embolism of the brain that shut off the blood from the respiratory and circulatory nerve centers. This man's death made a great impression on me. I felt as if I had been conversing with a man who had suddenly died, and momentarily had returned to life to tell his earthly comrades that death was no more to be dreaded than sleep. I used this instance in a lecture to a class of vigorous, happy Sargent School girls, to illustrate the probable painlessness of the death of one of their schoolmates, who had recently been drowned while she was trying to save two or three others. Then I went further, and asked them what lesson should be learned from the circumstances of this man's death. I obtained the immediate reply, "Never dance with the prettiest girl in the hall."

To revert to the matter of heat prostration and the discomforts of doing work in physical training during the summer months, it never seems to occur to the critics that the spectator suffers from the heat more than the performers. The latter are interested and absorbed in the work. Moreover, they are lightly clothed, so that as soon as they begin to perspire freely the excessive evaporation cools them so that they forget about the heat.

The day that John Fisk, the eminent historian, died in Cambridge from the effect of excessive heat, the thermometer went as high as 98 or 100 degrees. Yet the Summer School pupils carried on their work as usual without any harm. People forget that good physical condition is a safe-guard

against the dangers of sudden changes of temperature, or the extremes of heat and cold. We found, however, that we had heat prostrations to face if we allowed the pupils to play violent games in the sun. For this reason, we had to bar the practice of field hockey, football, lacrosse, and running games, and teach their theory only, using blackboard demonstrations or little figures manoeuvred about on a field. Swimming was the most invigorating and refreshing form of out-door exercise which we could recommend, and the demand for swimming instruction was so great that the small wooden tank in the basement of the Hemenway Gymnasium was quite inadequate. In consequence, we had to resort to the nearby beaches, an unsatisfactory solution because we lost so much time in commutation, and because we had to grapple again with the chaperon rules. We thought that our problem was solved, for the women at least, when the Radcliffe gymnasium was built with a fine large swimming pool in the basement. The Radcliffe Council graciously granted the appeal of the President of Harvard for the use of the pool, and the Corporation passed a vote of thanks, when some mysterious influence withdrew the courtesy. Since we had advertised swimming instruction in our catalogue, we had to send the pupils over to the Brookline Municipal Baths, until the pools at the Sargent School and at the Cambridge Y. M. C. A. were built. By this unhappy experience, I learned that corporations as well as individuals were frequently forced to accept gifts with strings attached that might always be pulled at the pleasure of the donor.

In the face of these difficulties, which now seem like tiny breezes that ruffled an otherwise calm sea of achievement, physical training at the Summer School proceeded and continued to attract scores of people from all over the country. I feel that this course did more to further the cause of physical education and to make a more homogeneous group of people familiar with its purposes and ideals than any other single influence. As I look back upon the trials and tribulations, they seem as nothing in comparison with the unquestionable accomplishment of the Summer School.





















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